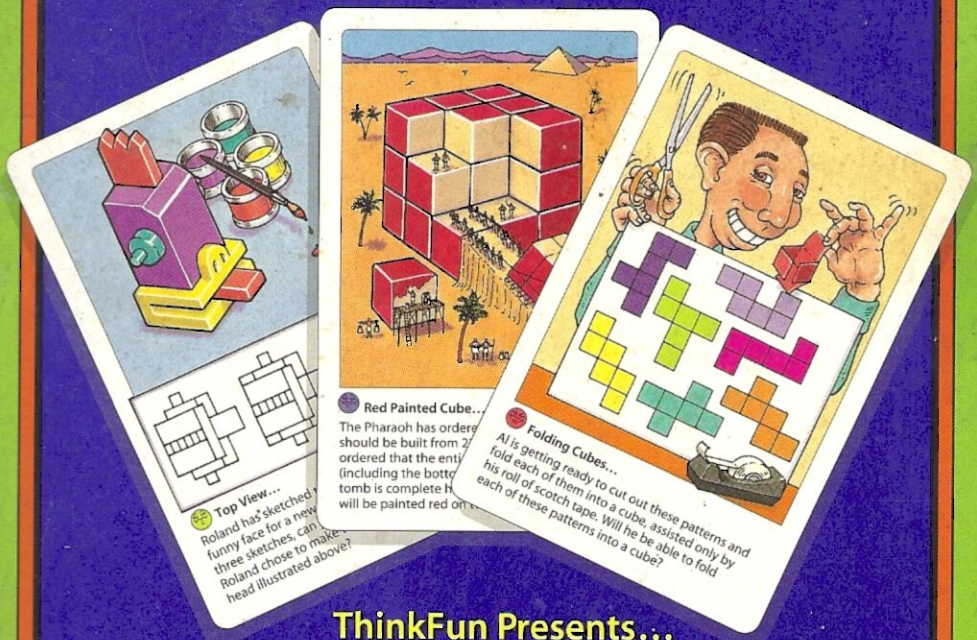
VISUAL BRAIN STORMS

The Smart Thinking Game



ThinkFun Presents...
100 of the World's Best Brainteaser Questions,
Guaranteed to Challenge, Entertain,
Puzzle and Amuse You!

VISUAL BRAIN STORMS®

The Smart Thinking Game

Visual Brainstorms is a collection of 100 individual brainboggling question cards. Each card stands on its own… you can play sets of cards together as a game, or you can enjoy them as individual challenges to delight you at special moments. Here are some ideas for getting the most out of them.

TO PLAY AS A GAME

Who Can Play: One player, two players, and teams. We recommend ages 11 and up, with younger players teaming up with an older partner.

Equipment to Bring: Pencil and paper are allowed and can be helpful for some questions. (When playing "Group Scoring" game, you will need to jot down your answers.) No computers, calculators, or slide rules… these won't help you anyway. Gray matter is a definite plus.

Suggested Ways to Play:

Solitaire: Play each card, then check to see if you're right. Then play the Bonus Question. You decide how to keep score (see options on back).

Head to Head: Form two teams, one or more players per team. Decide on how to keep score, and on a time limit per question. Decide who goes first. Fire questions at each other until the round is over… the team with the highest score wins!

Group Game: Form teams, as many as you want. Teams consist of one or more people. Place a card on the table, where everyone can see it. Team members, take a good look, then start straining your brains. First team that thinks they have the answer, jot it down on a slip of paper and call out "Finished!" Other teams get one minute more to jot down their own answers before time is called. Score points for each team with a correct answer. Team that called out "Finished!" is entitled to answer the Bonus Question.

HOT TIPS

Adjust time limits up or down as you choose.
For some groups, it is smart to have a referee.
Take a moment with each card to talk about how you came to the answer.
Studying clocks can be helpful.
Get that gray matter humming!

OPEN

How to Score:

Play for Points: Set a limit… five points, eleven points, whatever, and go for it!

Play for Time: Set your clocks… ten minutes, half hour, your call. Highest score at the buzzer is the winner!

Play for Cards: Choose a set of cards… five cards, ten cards, you decide. Top score takes top honors!

VB cards are color-coded to indicate level of difficulty and scoring value.

- Yellow: "Easy" question, score 1 point.
- Blue: Hard question, score 2 points.
- Red: Extra hard question, score 3 points.

Bonus questions, score 1 point.

May the Best Brain Win!

FREE-FORM PLAY

Visual Brainstorms® is more than just a game.
Try some of these suggestions, then make up your own!

Play "One-a-Day"… one card each day at the breakfast or dinner table to stimulate family conversation.

Slip a card or two into the envelope each time you write a friend or relative, without saying anything… and see what response you get. The full effects of this may not be felt for years!

Keep a stack on your hall table and give out cards as "exit gifts" every time a friend comes to visit.

Give a hard one to your teacher when everybody is looking!

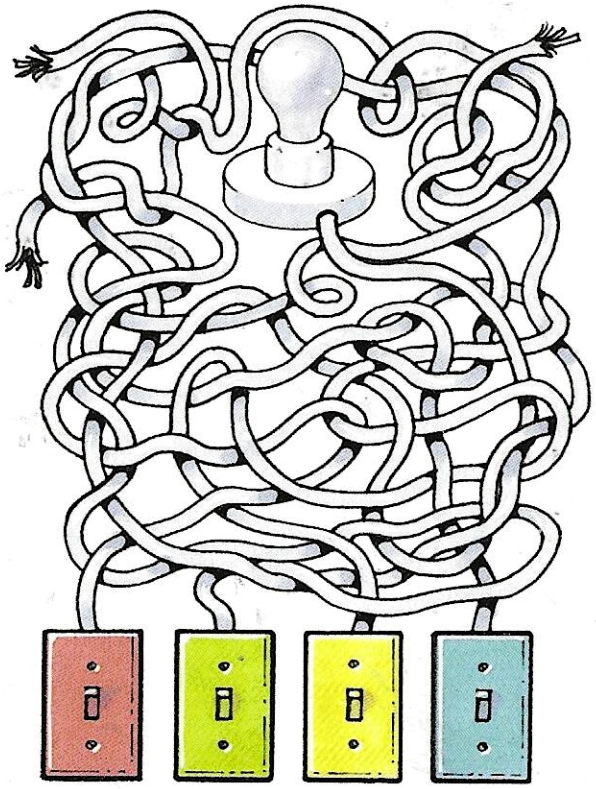
Just carry a few around in your pocket and launch them, one at a time, when the moment seems right.

Think of a new way to play. These cards are power-packed… and our guess is that you will be pleasantly surprised when you let them out into your world, in any form!

Watch for Visual Bonus Eyeball!

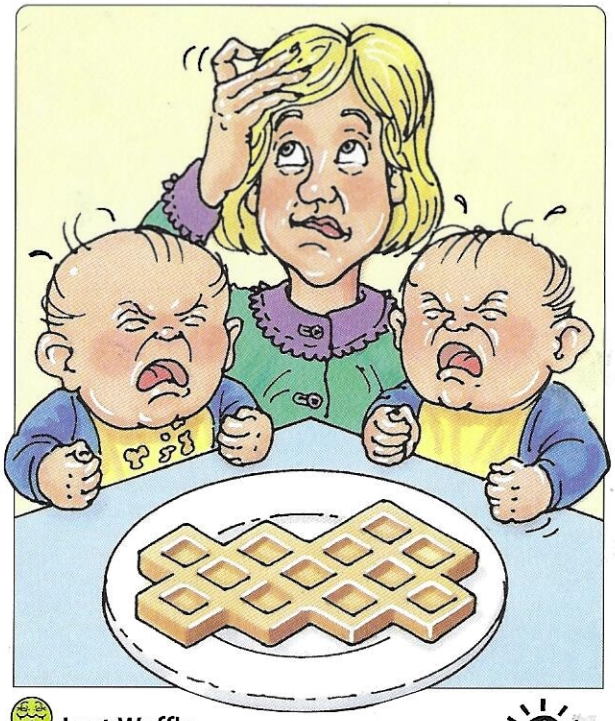
Look for the "Visual Bonus" eye on the front of the card, above the question. Memorize everything you can about the picture when you get one of these, because the bonus question will ask you about some detail in the scene.

OPEN



Wiring Tangle…

Only one of these four switches has power and will turn the light bulb on when flipped. What is the color of the switch you should pick to do the job?

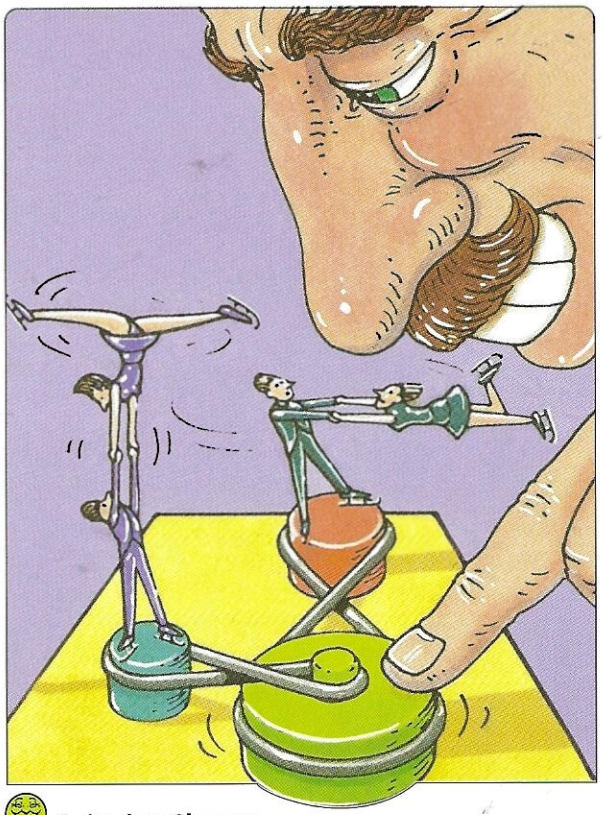


Last Waffle…

Betty has a problem, for the last waffle came out of the press as shown, and the twins ALWAYS insist that their waffles each have the same shape. Can you help Betty and show her how to cut the waffle to get two identical pieces? (Note: the twins can't tell the difference between a knife cut and the baked outside of a waffle.)

Hamster Walker…

Bruce has just assembled the latest exercise device for his hamster. He lost the instructions, but is pretty sure that this is the right way to set the belts. The hamster is about to start its aerobics… will the belts turn freely or not?



Spinning Skaters…

Roland has just completed a new music box. When he spins the green belt wheel clockwise, will the two skating couples spin in the same direction or in opposite directions?

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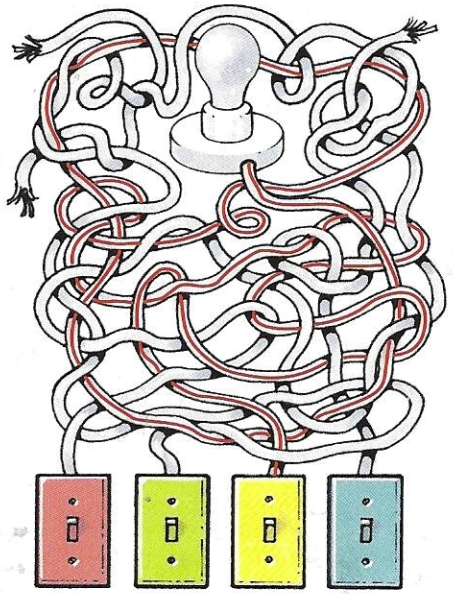
Answer: The yellow switch will do the trick.



Bonus: Who invented the electric light bulb? Was it: A. Michael Faraday, B. James Watt, or C. Thomas Edison?

Answer: Thomas Edison. James Watt (1736–1819) is best known for the development of the steam-engine and Michael Faraday (1791–1867) for his experiments in electricity and magnetism.

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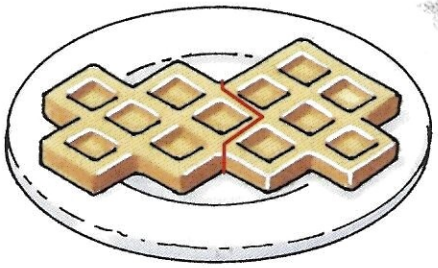
Answer: Yes.

Here's how: Count the total number of squares in the waffle and divide by two. Now you know each waffle must have 6 squares. Betty's clever cut is illustrated below.



Visual Bonus — Do Not Turn Card Over

Bonus: Which twin has spittle on its sleepy-shirt?

Answer: The twin on the left.

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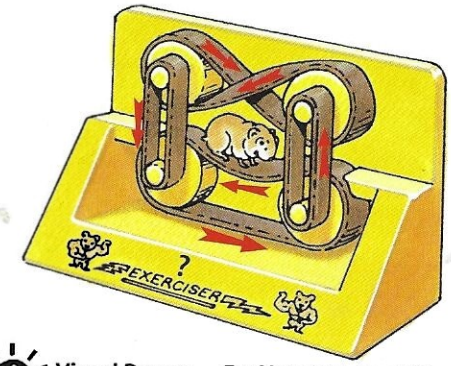
Answer: No, the belts will not move freely.

Here's how: With only one belt twisted he has essentially locked all the belts. For Bruce's hamster to get his aerobic workout and have all the belts turn freely, Bruce must cross none of the belts, two of the belts or all of the belts. Crossing one or three belts will freeze all four.



Visual Bonus — Do Not Turn Card Over

Bonus: What was the name of the company that manufactured Bruce's hamster exercise device? Was it: A. Hamster-Track, B. Hamster-Pro, or C. Hamster-Flex?

Answer: Hamster-Pro.

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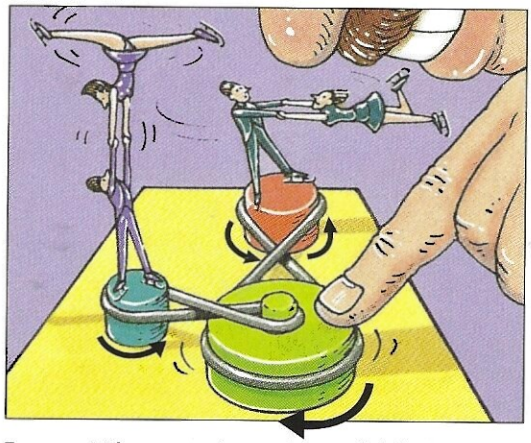
Answer: The skaters will spin in the same direction… counter-clockwise.

Here's how: In the illustration below, the arrows indicate the direction the gears will turn.



Bonus: Who won the gold medal for women's singles figure skating in the 1968 Winter Olympics? Was it: A. Peggy Fleming, B. Mary Lou Retton, or C. Dorothy Hamill?

Answer: Peggy Fleming. Mary Lou Retton captured the gold for all-around gymnastics in 1984 and Dorothy Hamill skated to a singles gold in 1976.

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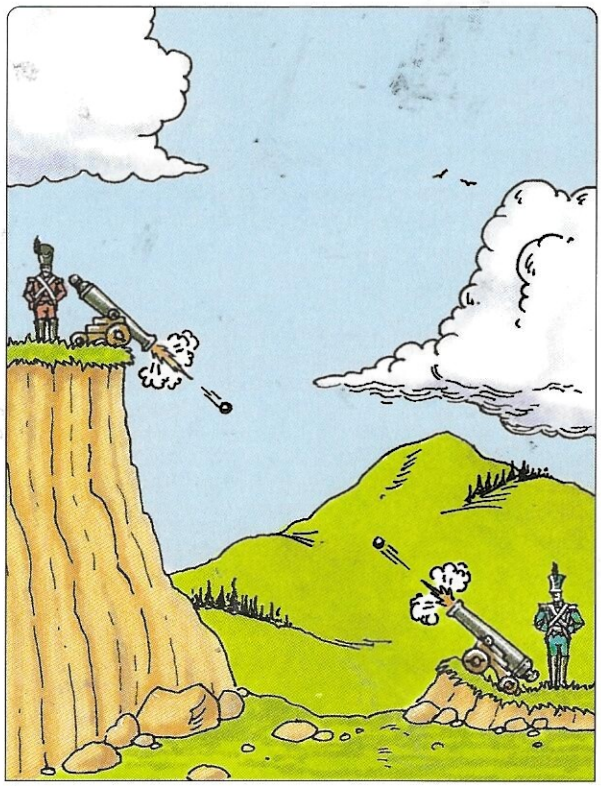
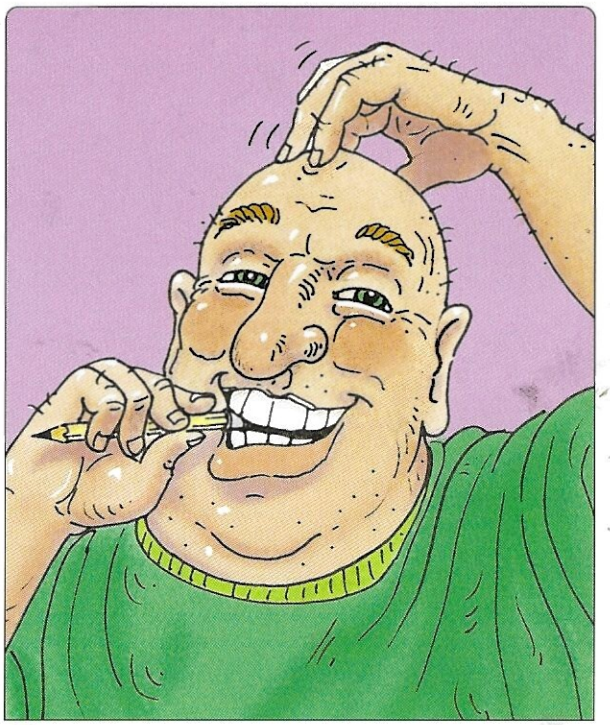


Cannon Duel…

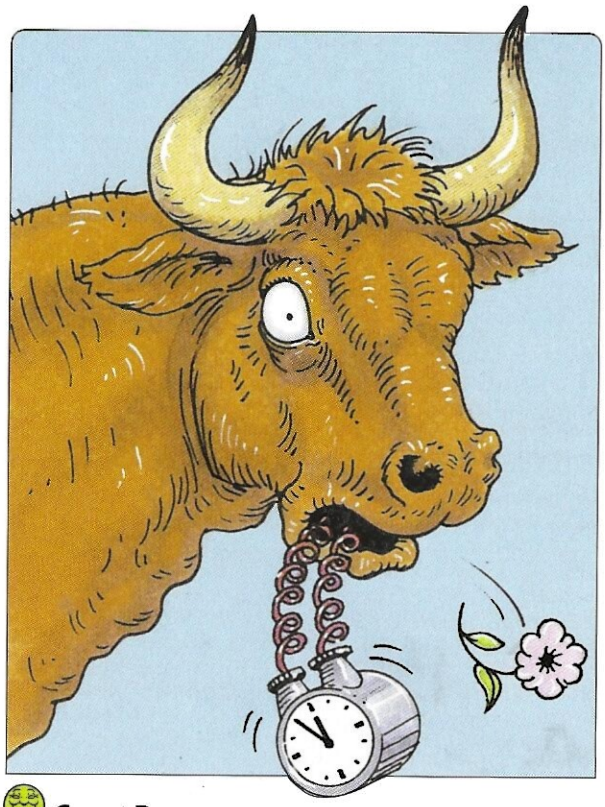
Two identical cannons are aimed at each other, their shells fired simultaneously at exactly the same speeds. Ignoring wind resistance for a moment, will they hit each other or will they miss?



Word Thoughts…

Percy has found a new word game. What single four letter word can be placed before each of the words below to make four new words? (Hyphenated words are allowed.)

_ _ _ _ TRAP, _ _ _ _ PLACE, _ _ _ _ BUG, and _ _ _ _ FLY



Count Down…

Maurice the bull has just swallowed a time bomb that is going to go off in five minutes. Which of the following four words best describes the situation… Awful, Abominable, Dreadful, or Shocking?

Chow Time…

The pups dug into dinner. Polaris ate more than Sirius; Castor ate less than Pollux; Pollux ate less than Sirius but more than Rigel. Which pup ate the second most?

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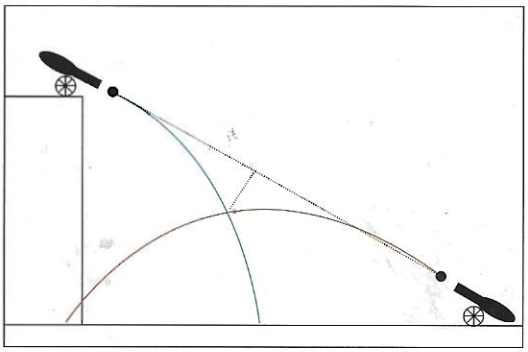
Answer: The cannon balls will hit each other.

Here's how: The cannon balls start out in a straight line towards each other, but then each ball is pulled off this line by the force of gravity. However, each ball will fall from this line of fire by the same amount as the other, and so a collision is inevitable. Inevitable, as noted, unless drawn off course by air resistance or unless the cannons are completely out of range of each other.



Bonus: Who invented gunpowder? Was it: A. the Chinese, B. the Greeks, or C. the Turks?

Answer: Most historians agree that the Chinese were the inventors of gunpowder.

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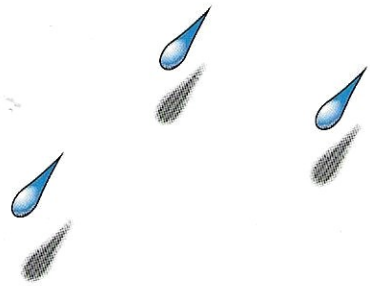
Answer: Fire… firetrap, fireplace, firebug and firefly.



Bonus: Are fireflies flies?

Answer: No. Fireflies are actually soft-bodied beetles.

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Answer: Abominable… A-bomb-in-a-bull.

Bonus: Name the bull that loved to smell flowers in the classic children's story written in 1936 by Monro Leaf and illustrated by Robert Lawson.

Answer: Ferdinand.

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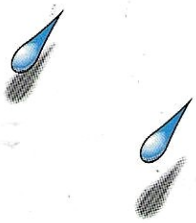
Answer: Sirius ate the second most food.

Here's how: Polaris is the top eater because all other pups are described as eating less than someone else. Sirius comes in second, because she eats more than Pollux who eats more than either Rigel or Castor. Not enough information is given, by the way, to determine which pup is the leanest eater.



Bonus: What do the names of the five dogs have in common? (You may reread the names aloud for this question.)

Answer: They are all names of stars.

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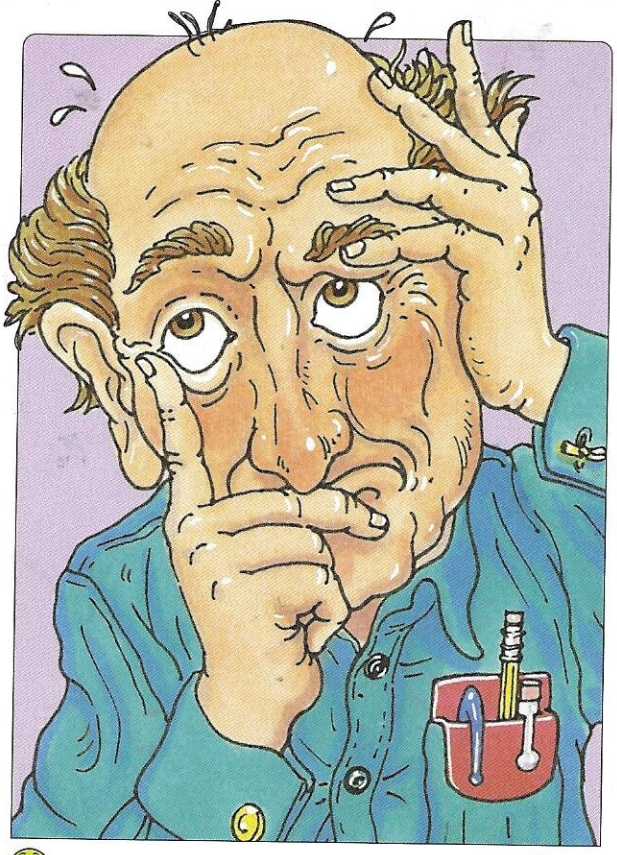
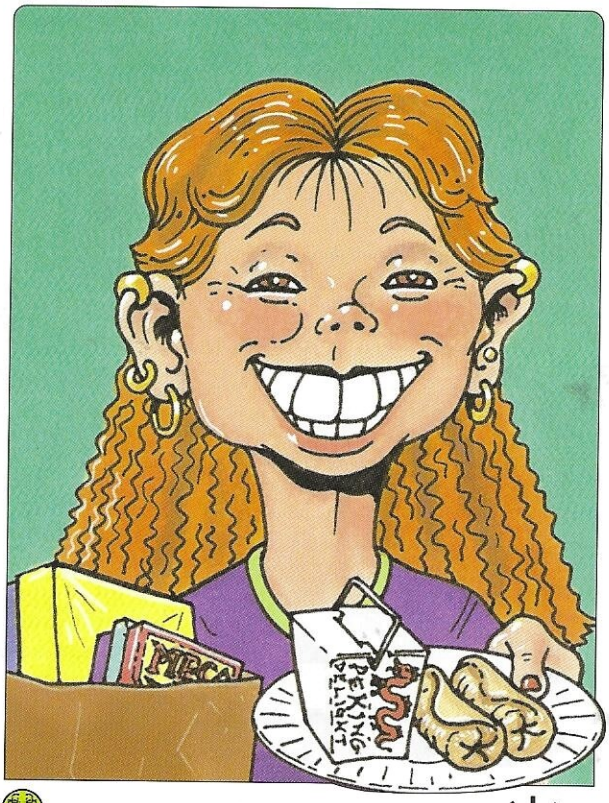


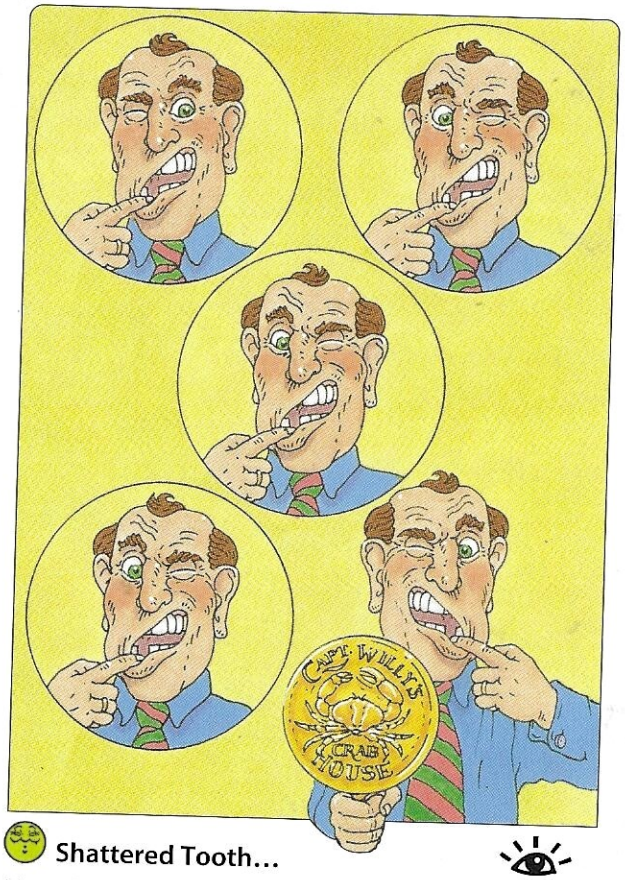
Fraction Frazzle…

Walter's stuck on a fraction problem… what is one twentieth of one half of one tenth of 10,000? Can you help him?



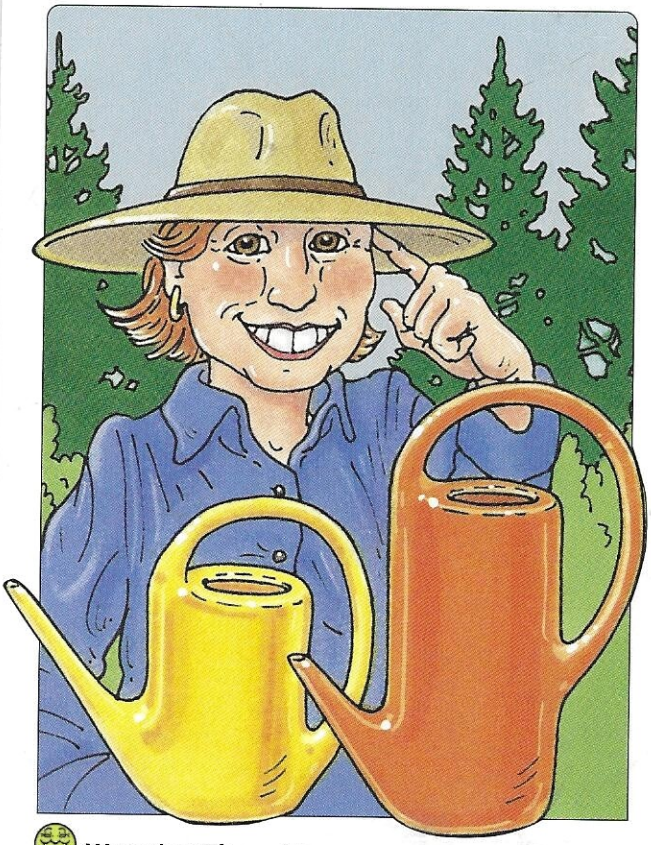
Mall Madness…

Kimberly headed to the mall with $60. If she spends 1/4 of her money on clothes, $30 on CD's and 10% of her original money pigging out at the food court, how much cash will she have left?



Shattered Tooth…

Tony has broken a tooth at the local crab house. Looking in a hand mirror, which of the four reflections illustrated is the one he will see?



Watering Thoughts…

Lois is trying to decide which of the two watering cans to buy. She wants the one that will hold the most water. Which one should she buy?

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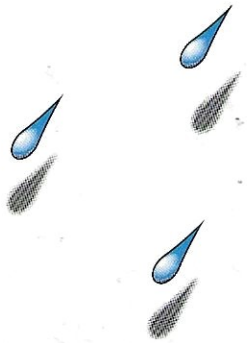
Answer: 25.

Here's how: Start from the end of the question… a tenth of 10,000 is 1,000; a half of 1,000 is 500; and a twentieth of 500 gets you the rest of the way.



Visual Bonus — Do Not Turn Card Over

Bonus: What color is the disgruntled fractioneer's pocket protector?

Answer: Red.

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Answer: Kimberly will have $9 left.

Here's how: Kimberly spent $15 on clothes (1/4 of $60 =$15), $30 on CD's, and $6 on food (10% of $60 = $6), for a grand total of $51. Subtract $51 from $60 and Kimberly's left with $9.

Visual Bonus — Do Not Turn Card Over

Bonus: What type of food did Kimberly order at the food court?

Answer: Chinese… (Kimberly loves Peking Delight's egg rolls and fried rice combo).

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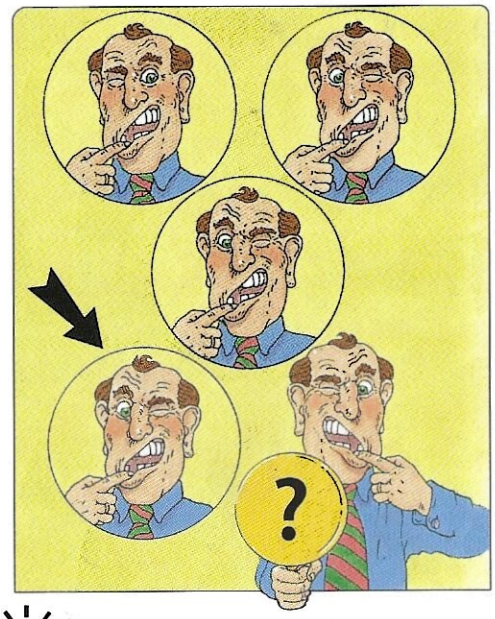
Answer: The correct reflection is indicated below.



Visual Bonus — Do Not Turn Card Over

Bonus: What is the name of the crab establishment where Tony broke his tooth?

Answer: Captain Willy's Crab House.

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Answer: Lois should buy the short watering can.

Here's how: The shorter can has a spout as tall as its rim, and so may be filled completely without overflowing. The other can, though taller, has a short spout; water cannot be added to this can above spout level without overflowing. Thus, it holds less water even though it looks bigger.

Bonus: What do the names Humped Bladderwort, Indian Pipe and Enchanter's Nightshade have in common? All are: A. prep-school epithets, B. tropical fish, or C. wild flowers?

Answer: They are all wild flowers.

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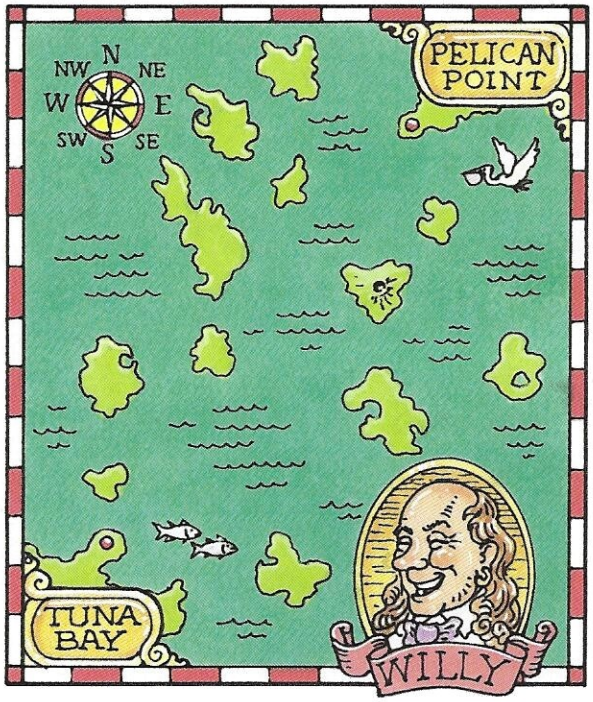
Path Exploration…

Archeologist Ruth Perkins has arrived at Mesa Grande, an ancient Anasazi Ruin. Is there a spot on the path where she can begin her exploration and follow the entire path without retracing any of her steps? (Crossing her path is ok.) If so, where should she start?



Charting a Course…

Captain Willy wants to plunder every island between Pelican Point and Tuna Bay. Setting sail from Pelican Point, he has plotted the following course to each island… SW, N, SE, N, NE, NW, SW, SE, S, NW, S and S. Given this course of action, will Willy be able to achieve his goal of conquest?

Three-Way Tug…

Three playful mutts have grabbed a set of rubber intertwined rings and are having a three-way tug-of-war. The blue ring is about to break. What will happen to the battle between the two other pooches when this happens?

Mobius Ride…

Judy and Dan are the first to try out the latest ride at the amusement park, an enormous mobius strip. If the cars are traveling at the same speed, will there ever be a collision (except possibly Judy's head on the superstructure)?

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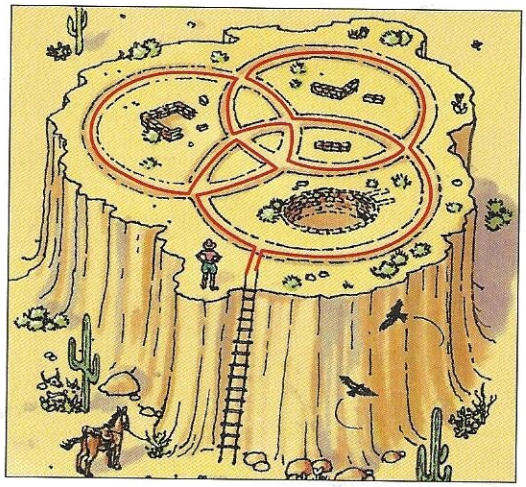
Answer: Yes. A good starting spot for Ruth and the path she will travel are indicated in the illustration below. But actually, she could start at any spot on the path and still explore the entire trail.



Bonus: Mycerinus, Chephren, and Cheops are ruins found in what country? Is it: A. Peru, B. Sri Lanka, or C. Egypt?

Answer: These are the names of the three great Fourth Dynasty pyramids found at Giza, Egypt.

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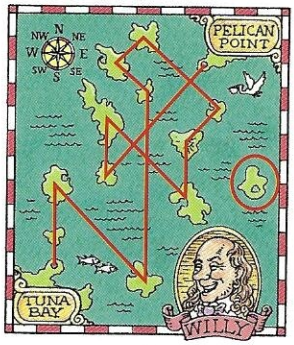
Answer: Not quite. By charting this course, Willy will fail to land on the southeastern most island on the map, although he will surely hit and plunder every other island on the way to Tuna Bay.



Bonus: In the early 1800s a terrifying pirate roamed off the coast of Virginia and the Carolinas. His name was Captain Edward Teach. He was described as having a beard of such fantastic dimensions that he wore it tied up with ribbons and part of it looped over his ears. By what other name was Captain Teach known?

Answer: Blackbeard.

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Answer: If one of the three rings breaks, the remaining two rings will fall apart. All three dogs look like they're in for a tumble.

Bonus: How many rings are in the Olympic symbol?

Answer: Five.

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Answer: No they will not. Although Judy and Dan will end up riding over every spot on the rail before returning to their respective starting positions, they are moving in the same direction and will not collide.

Visual Bonus — Do Not Turn Card Over

Bonus: Who seems to be enjoying this ride more… Judy or Dan?

Answer: Judy.

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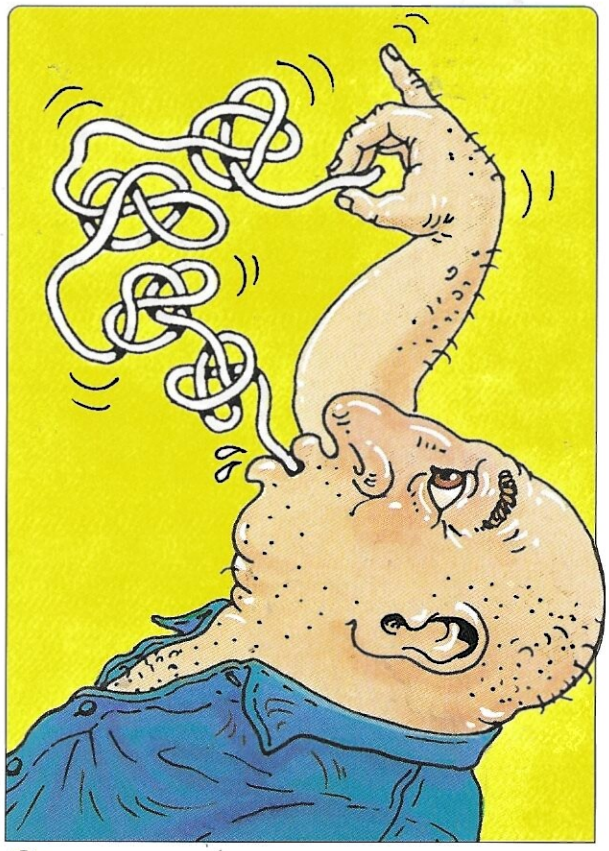
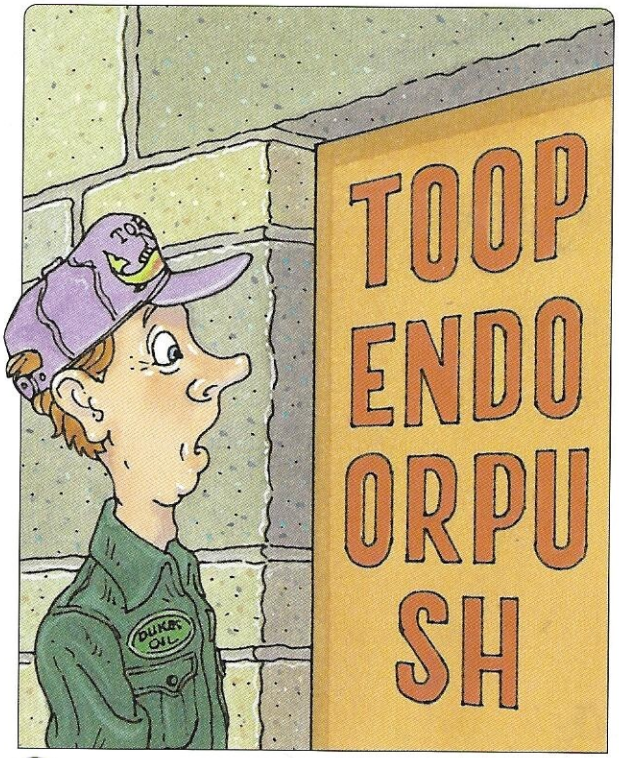


Meet Me in the Middle…

How many actual knots will Percy encounter as he slurps down this strand of spaghetti?

Meet Me in the Middle…

Which pair of ladybugs will meet in the middle first?



Cryptic Message…

Buzzy the furnace repair man was told to go around back and come in through the basement door. The door had no knob or latch, but was adorned with the lettering shown in the drawing above. How will Buzzy get in?

Cryptic Note…

Bob has just been handed a note from Linda, which appears to be written in some sort of code. From the clues she has given, can you help Bob break this code and read the message?

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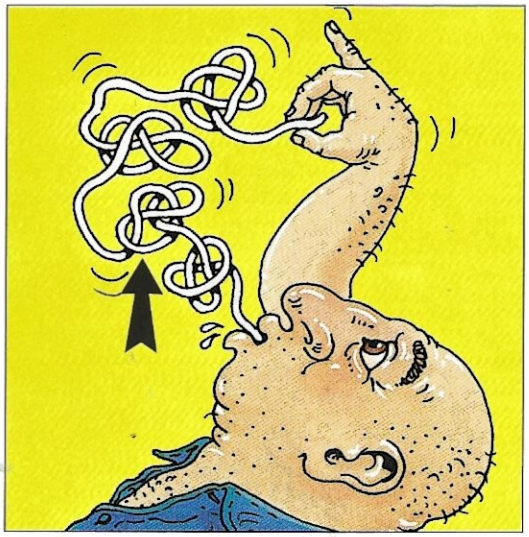
Answer: Only one. The rest of the tangles are not closed, and will fall free without locking in a knot.



Bonus: What do the names Reef, Fisherman's and Bowline all describe? Are they: A. cough drops, B. ways to catch fish, or C. types of knots?

Answer: They are all types of knots.

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Answer: The bottom pair.

Here's how: The top spiral wall is formed by one continuous loop and the ladybugs will never meet. The bottom spiral is formed by two separate loops and the ladybugs will be able to pass through them and thus they will meet.

Bonus: True or false: California citrus tree farmers successfully use the ladybug (or ladybird beetle) instead of chemical pesticides to control crop-damaging aphids and scale insects.

Answer: True.

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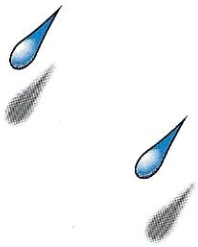
Answer: Break apart the individual letters to read the sentence, "TO OPEN DOOR… PUSH".



Visual Bonus — Do Not Turn Card Over

Bonus: Was the basement foundation made of brick or stone?

Answer: Stone.

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Answer: The broken code reads: "URAQT"… (You are a cutie) and "INVU" (I envy you). Linda just might have a crush on Bob.

Bonus: If you pronounce "GH" as in "TOUGH", "O" as in"WOMEN", and "TI" as in "EMOTION"… how do you pronounce the word "G-H-O-T-I"?

Answer: Fish.

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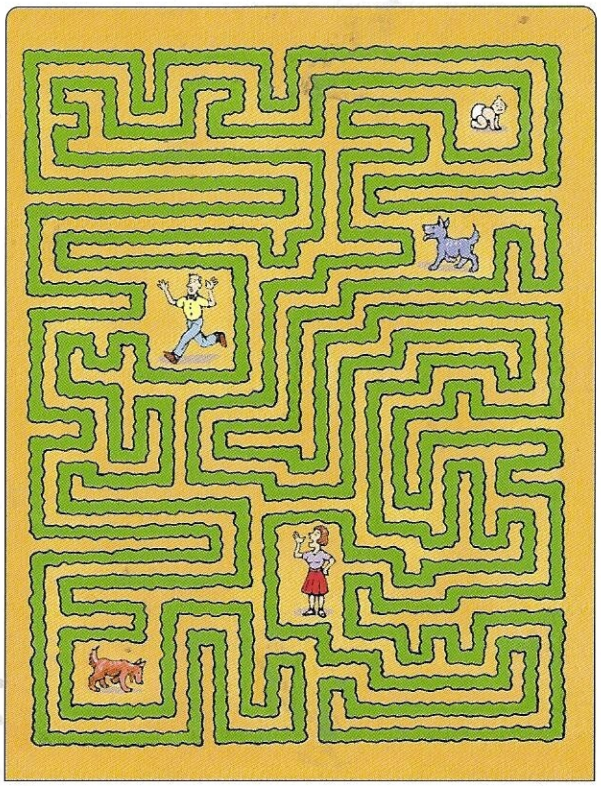
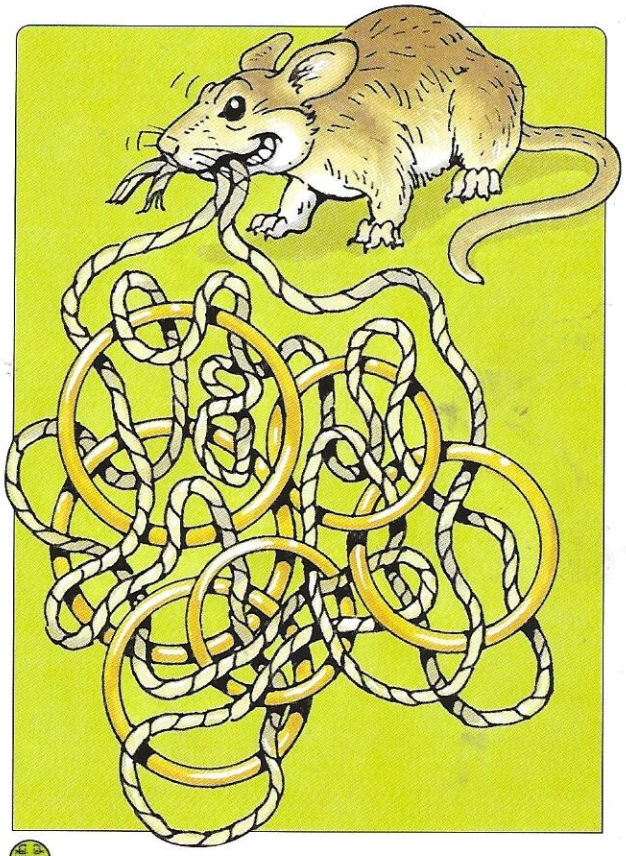


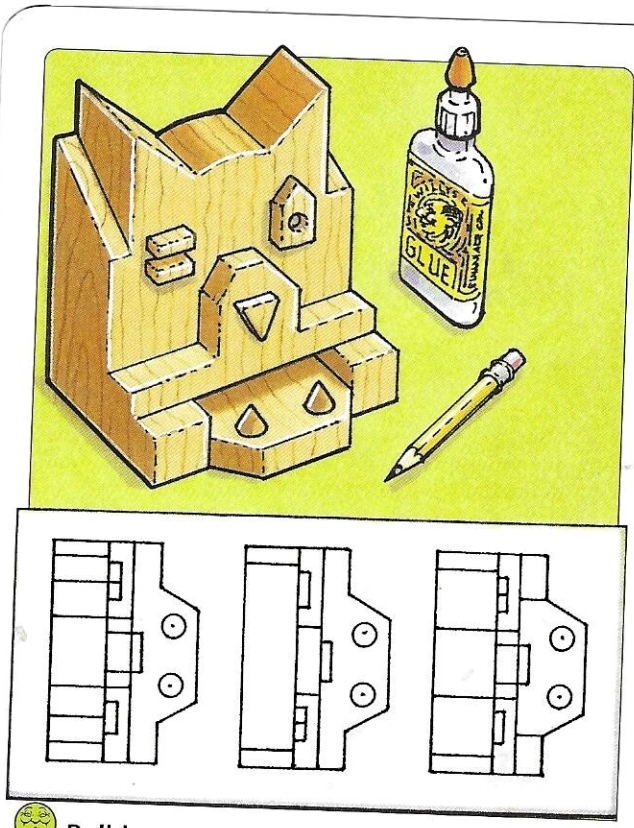
Baby Get-a-Way…

Little baby Peuki has crawled into a garden maze and disappeared. The search is on. Who will reach Peuki first… Mom, Dad, or one of the family hounds, Blue or Ol' Red?



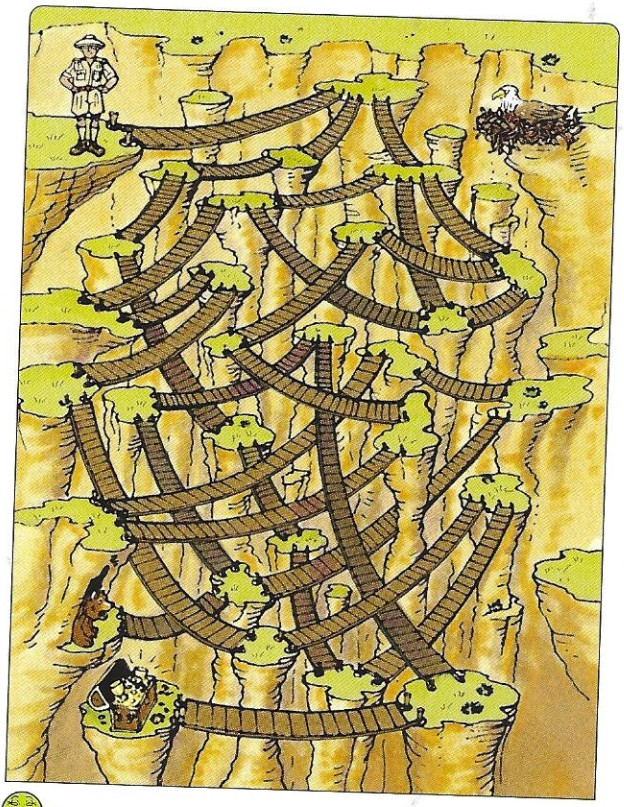
String of Rings…

Paulina the pack rat is ready to drag her latest find back to the nest. Are all six rings captured on the loop of string?



Bulldog…

Roland has sketched three different top views of a bulldog head for a new building project. From these three sketches, can you select the top view that Roland chose to make the three-dimensional head illustrated above?



Treasure Trail…

Professor Pith Bugby is about to enter a maze of hanging bridges in search of hidden treasure. Will his quest be successful? If so, what is his route?

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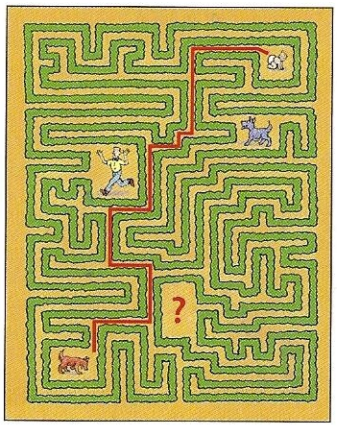
Answer: Ol' Red will reach baby Peuki first.

Here's how: It is interesting to note that this maze is a closed loop: that is, it winds around to form the maze without ever crossing itself, thus dividing the space into an inside and an outside. Mom, Dad and Blue are all on the inside of the loop and will never reach baby Peuki unless they hop over the hedge.



Visual Bonus — Do Not Turn Card Over

Bonus: What color is Mom's skirt?

Answer: Red.

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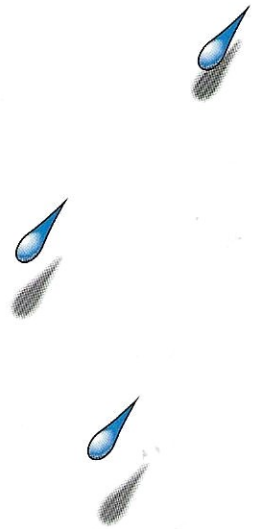
Answer: Yes, all six rings are captured on the loop of string. What a haul!



Bonus: Which rat holds the long distance jumping record. Is it the: A. Whitethroat Woodrat (or pack rat), B. Norway Rat, or C. Bannertail Kangaroo Rat?

Answer: The Bannertail Kangaroo Rat which routinely hops up to 6 feet in one bound.

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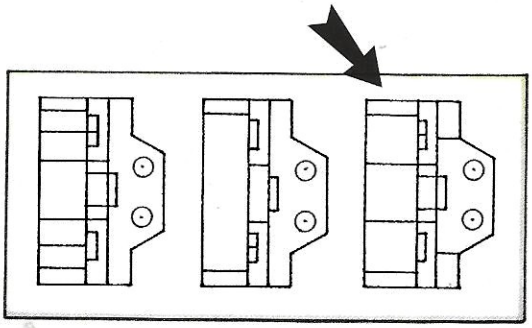
Answer: The correct top view is indicated below.



Bonus: True or false: the national dog of Britain is the bulldog.

Answer: True.

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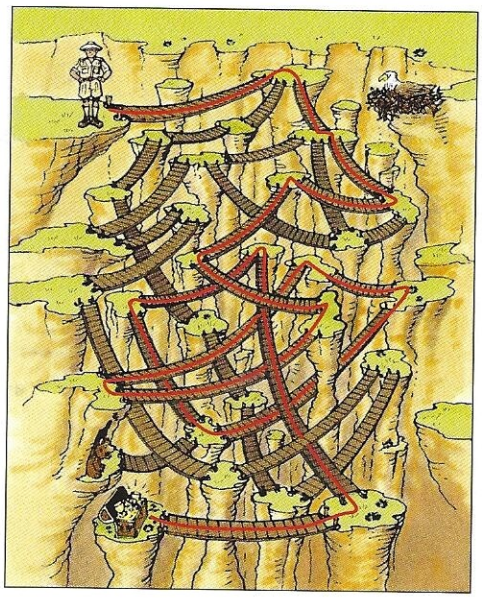
Answer: Yes he will be successful, by following the route illustrated below.



Bonus: Jason and the Argonauts sailed in quest of: A. the Golden Hind, B. the Golden Fleece, or C. the Golden Nugget?

Answer: The Golden Fleece.

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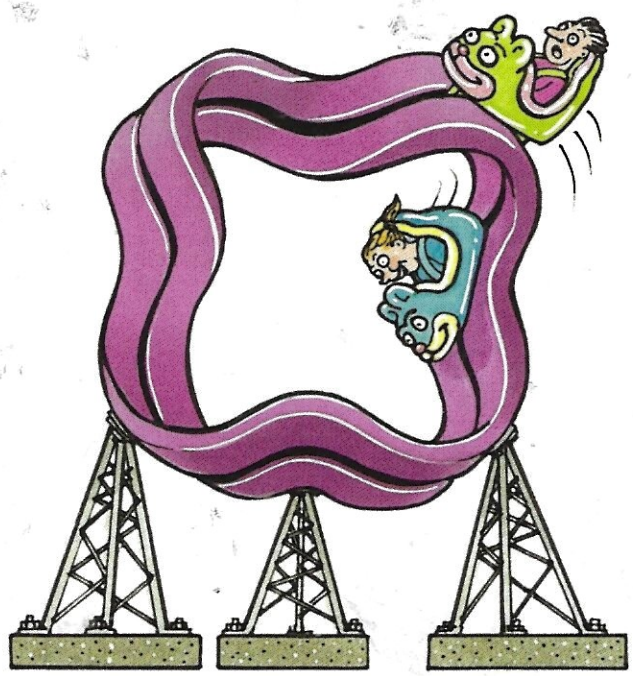
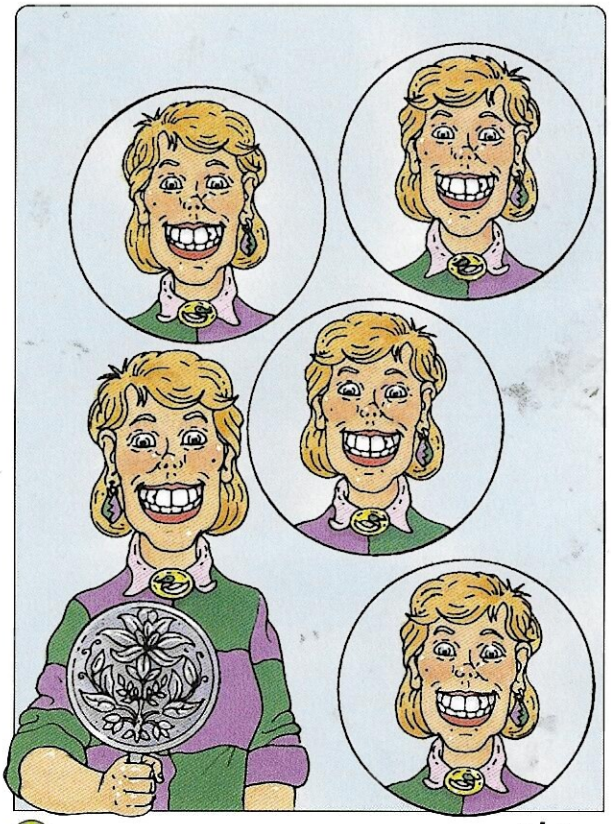


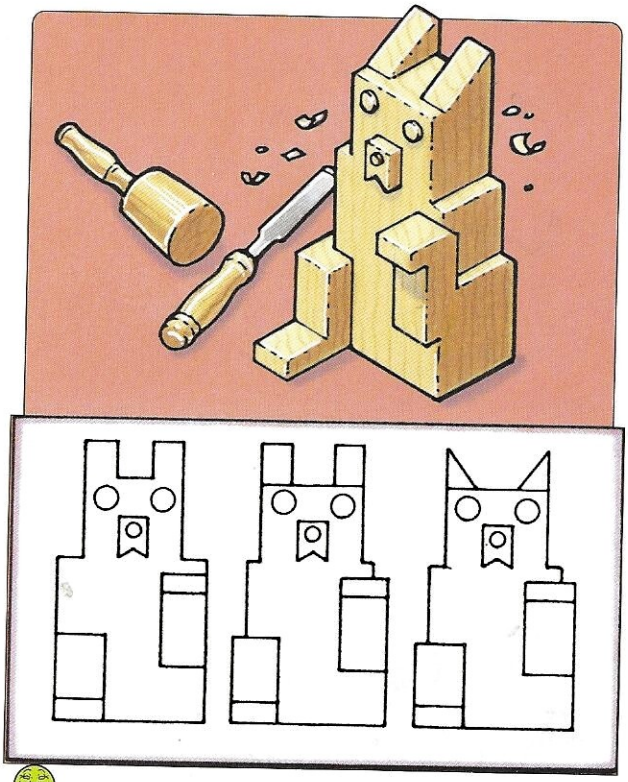
Wild Ribbon…

Judy and Dan are the first to try out the new Wild Ribbon ride at the amusement park. Traveling at the same speed, will the two cars ever collide?



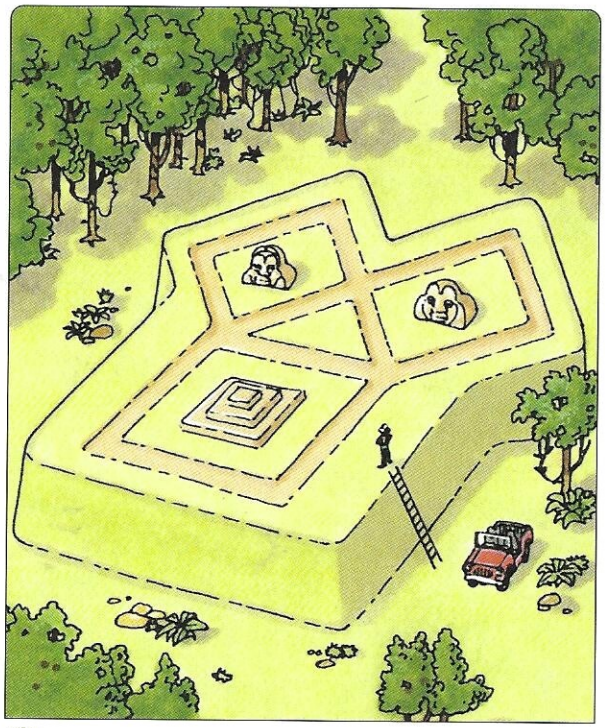
Poppy Seed Check…

As Debbie checks out her smile in a hand mirror, which of the four reflections illustrated is the one she will see?



Bear paw…

Roland has sketched three different front views of a Teddy Bear for a new building project. From the three sketches, can you select the front view that Roland chose to make the three-dimensional Teddy Bear illustrated above?



Prudent Path…

Archaeologist Ruth Perkins has arrived at an ancient Mayan ruin. Is there a spot on the path where Ruth may begin her exploration and follow the entire path without retracing any of her steps? (Crossing her path is OK.) If so, where should she start?

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Answer: No, thank goodness!

Here's how: The Wild Ribbon ride is two-sided; Judy and Dan are on opposite sides and therefore it will be impossible for them to ever collide, even though they are headed in opposite directions.

Bonus: You're about to jump on the Dragon Coaster at Playland Amusement Park… what State are you in (one of the 50, that is)? Is it A. Arkansas, B. Wisconsin or C. New York?

Answer: You would be in Rye, New York. The Dragon Coaster was designed by Fred Church in 1929 and has the proud distinction of being the fastest wooden roller coaster still in operation… 60 mph. It has an 80 foot drop and is 3600 feet long.

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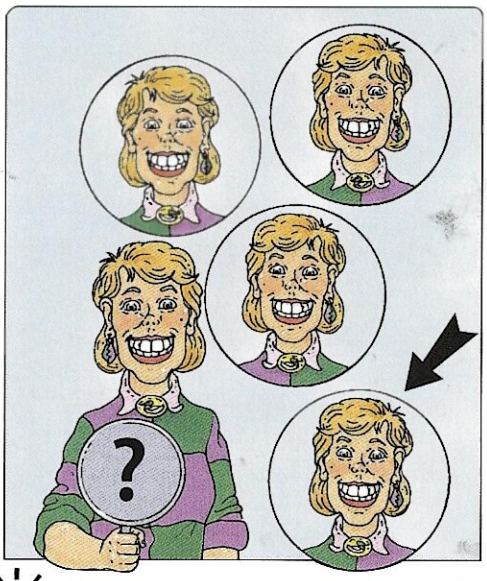
Answer: The correct reflection is indicated below.



Visual Bonus — Do Not Turn Card Over

Bonus: Was the back of Debbie's mirror adorned with a floral design or a geometric pattern?

Answer: A floral design.

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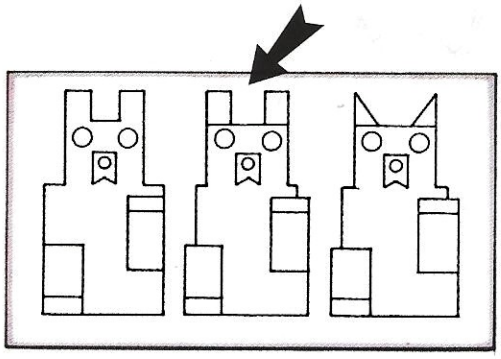
Answer: The correct front view is indicated below.



Bonus: Who was the Teddy Bear named after? Was it: A. Teddy Roosevelt, B. Teddy White, or C. Teddy Kennedy?

Answer: President Theodore (Teddy) Roosevelt.

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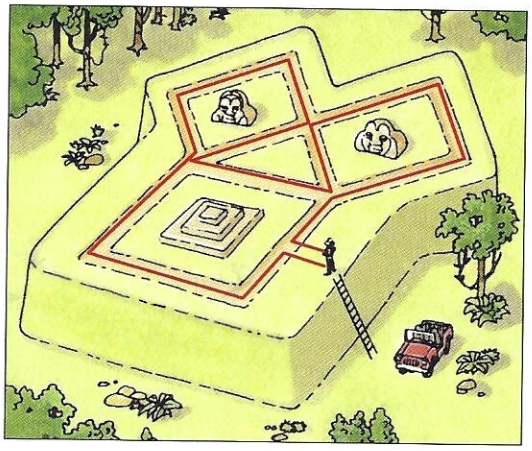
Answer: Yes. A good starting spot for Ruth and the path she will travel are indicated in the illustration below. But actually, she could start at any spot on the path and be able to accomplish her goal.



Bonus: The Erechtheion, Parthenon and Temple of Athena Nike are all ruins that make up what famous site in Athens, Greece? Is it: A. the Colosseum, B. the Left Bank, or C. the Acropolis?

Answer: The Acropolis.

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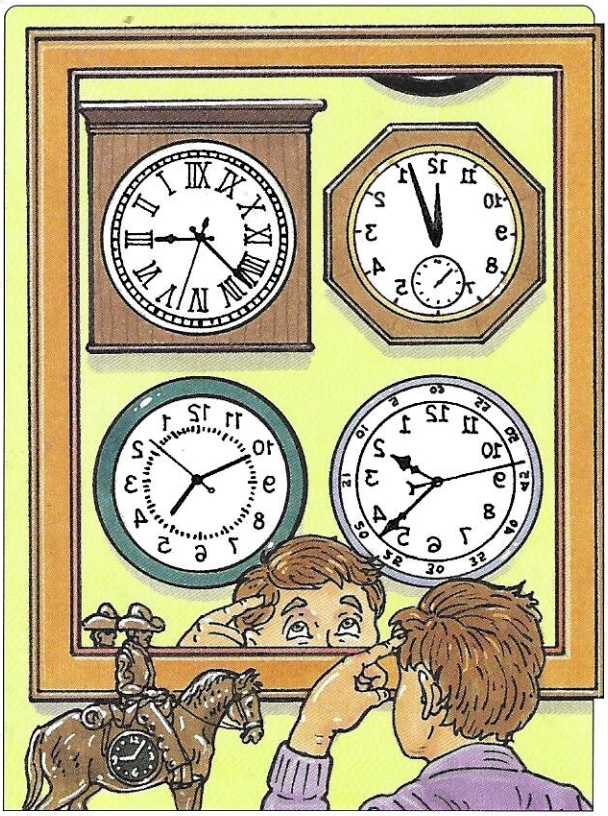
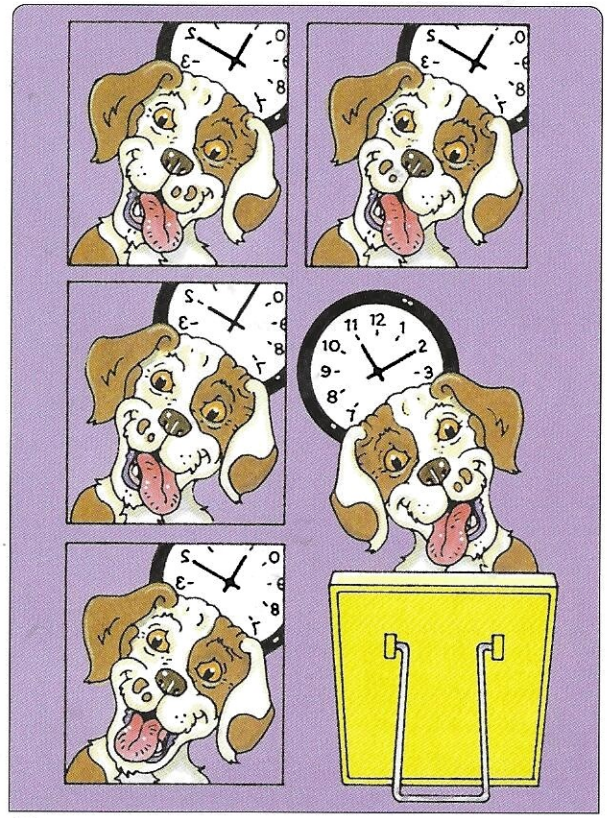


Time Check…

Looking into a large mirror, Jimmy sees the reflections of four clocks. If each clock chimes every hour, which one will be the next to chime?



Puppy Pondering…

As little Bucky looks at himself in the mirror, which of the four reflections illustrated is the one he will see?

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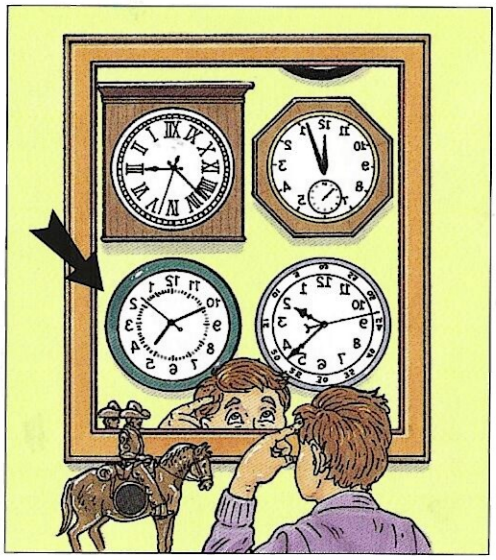
Answer: The clock reflection in the lower left reads ten minutes to five and will be the next to strike.



Visual Bonus — Do Not Turn Card Over

Bonus: What time was showing on the cowboy clock?

Answer: Approximately 9:05.

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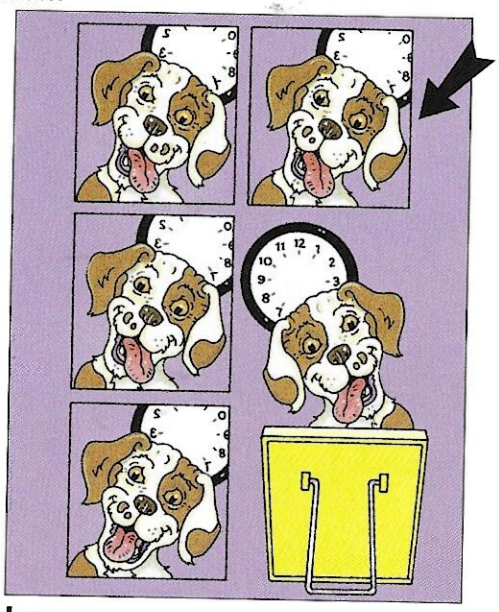
Answer: The correct reflection is illustrated below.



Visual Bonus — Do Not Turn Card Over

Bonus: At what hour and minute was little Bucky enjoying his reflection?

Answer: He was enjoying his reflection at 11:10.

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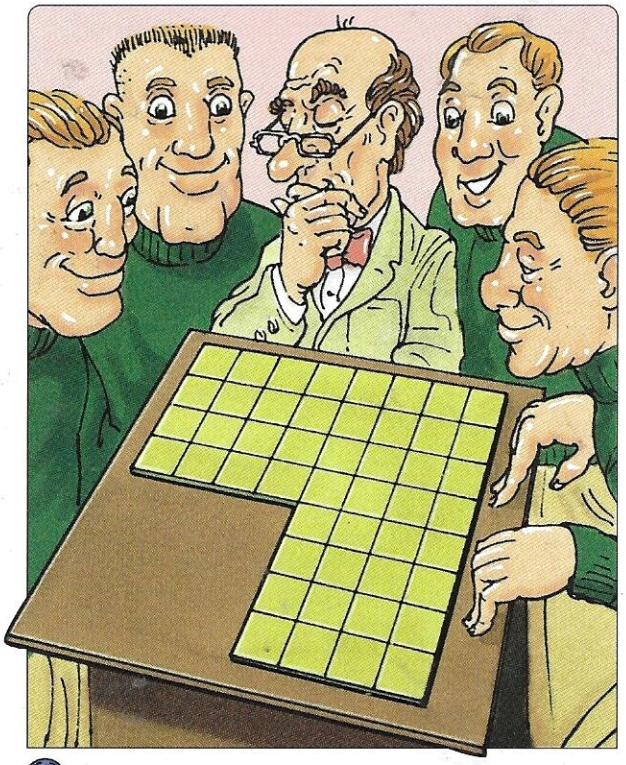
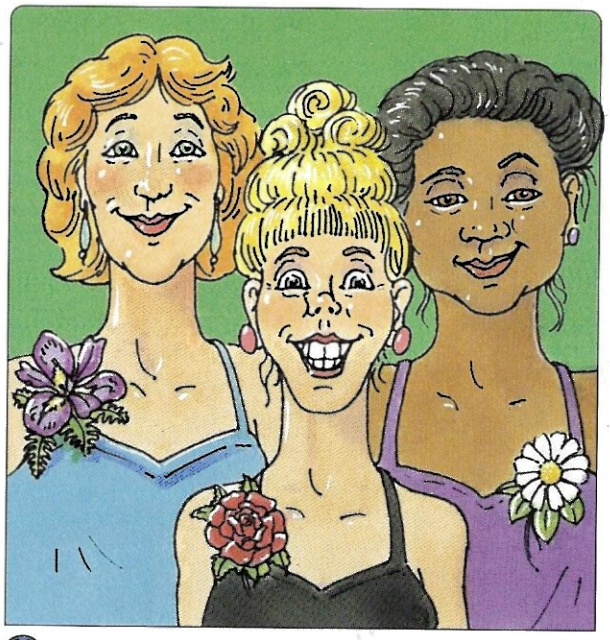


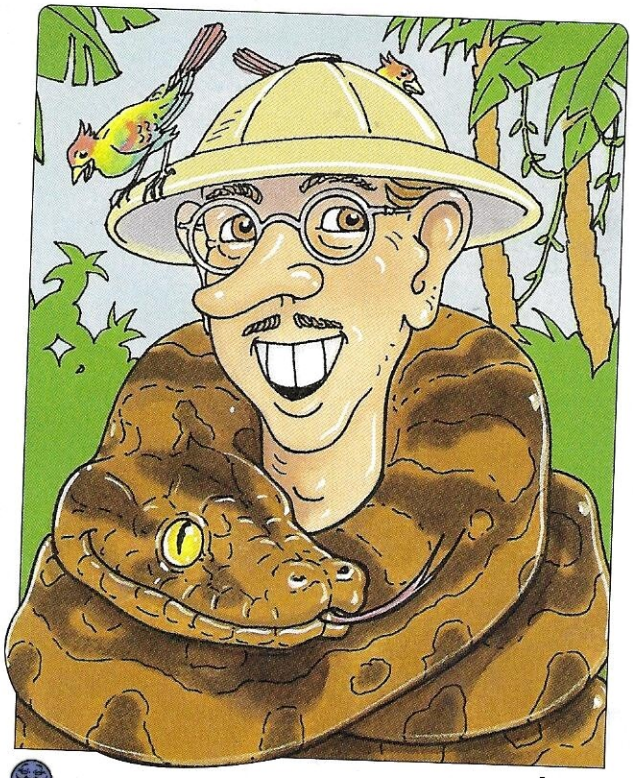
Plot Division…

The four Mahoney boys just inherited a plot of land from their grandfather. Using the grid lines shown they have asked Thomas the architect to divide the parcel of land into four identical plots. Can he do it? How?



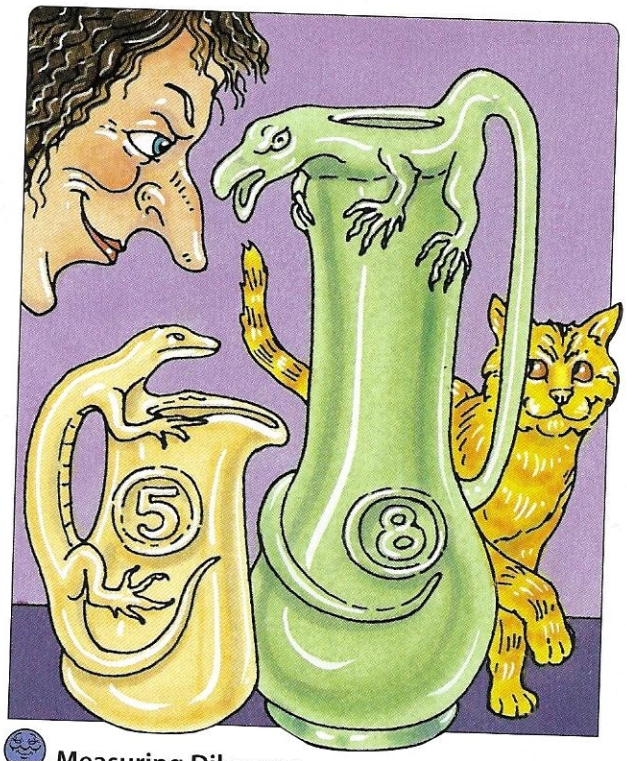
Prom Night…

These young ladies are Rose, Daisy and Iris, but not necessarily in that order. On prom night they gathered to get their picture taken. While posing, the woman wearing the rose corsage said, "I just noticed that the flowers in our corsages match our names, but none of us are wearing a flower that matches our own name." "Wow!" said Iris, "You're right!" Given these clues, can you identify who is who in the illustration above?



Lengthy Measure…

Professor Pith Bugby finished measuring the mighty python and announced with a smile, "I think we have a new record! The length of this beauty is 5 meters plus half its own length." How long, then, was the python?



Measuring Dilemma…

The young sorceress is planning a brew. The recipe calls for exactly 2 liters of liquid. To her dismay, she can only find a 5 liter and an 8 liter measuring pitcher. Can she use these pitchers only to measure out the 2 liters of liquid she needs?

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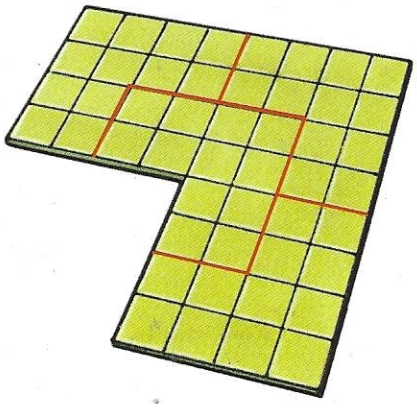
Answer: Thomas will be successful. The solution is illustrated below.



Bonus: Marble, a decorative stone favored by architects and sculptures, is what kind of rock? Is it: A. sedimentary, B. metamorphic, or C. igneous?

Answer: Metamorphic.

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Answer: From left to right we have… Rose, Daisy and Iris.

Here's how: The woman wearing the rose corsage is not Rose; nor is she Iris, for Iris responded to her observation. Therefore, she must be Daisy. This means Iris must be wearing the daisy corsage, leaving Rose wearing the iris.

Bonus: What do the names Holiday Flame, Pink Bubbles, and Heavenly Rapture have in common? Are they: A. "B" movies of the '50s, B. varieties of irises, or C. cocktail drinks using rum?

Answer: They are all varieties of irises.

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Answer: Yes.

Here's how: First she will fill the 5 liter pitcher and pour it into the 8 liter pitcher. Then, she will fill the 5 liter pitcher once more and start to fill the 8 liter pitcher. When the 8 liter pitcher is full the clever sorceress will have 2 liters remaining in the 5 liter pitcher; the amount she needs for her brew.

Bonus: Is a liter bigger or smaller than a quart?

Answer: Bigger… 1 liter = 1.057 quarts.

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Answer: 10 meters.

Here's how: Pith has phrased the problem this way: The snake's length is equal to the sum of 5 meters and half the snake's length. Imagine the snake divided into two equal lengths. If the snake's length is the sum of one of these halves, plus 5 meters, then 5 meters must be the other half. Therefore the total length is 10 meters.

Visual Bonus — Do Not Turn Card Over

Bonus: How many birds have landed on Pith's helmet?

Answer: Two.

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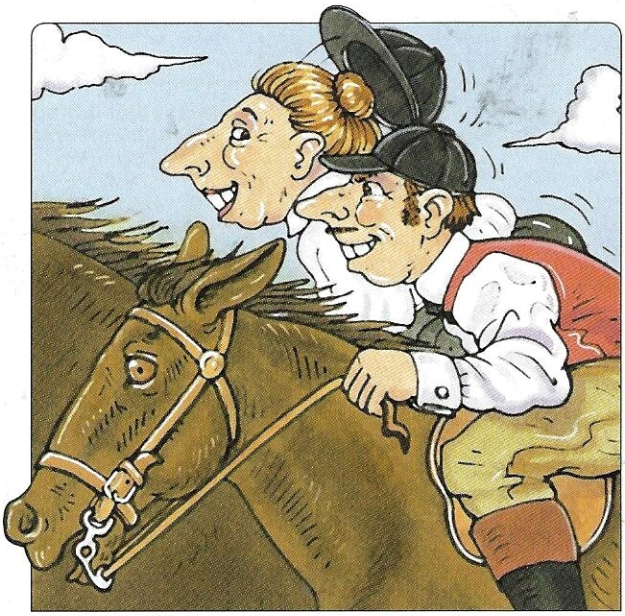
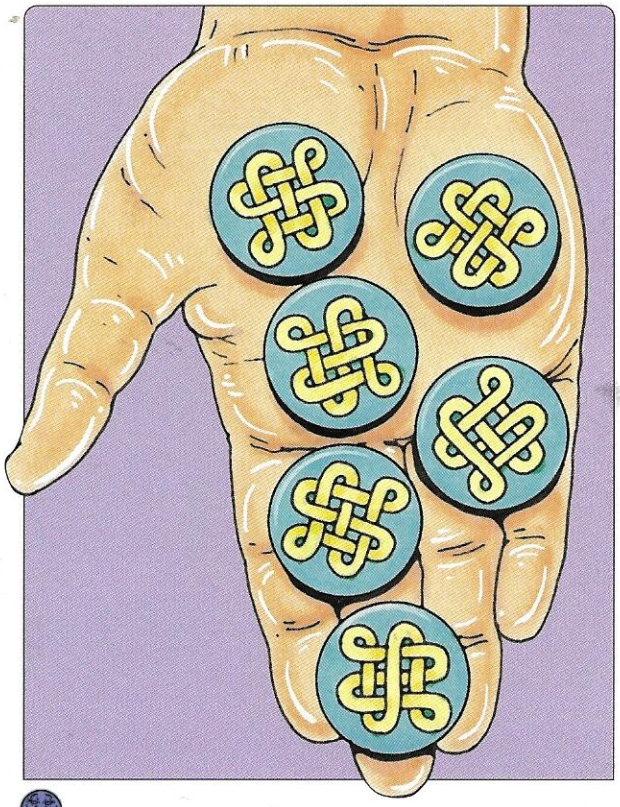


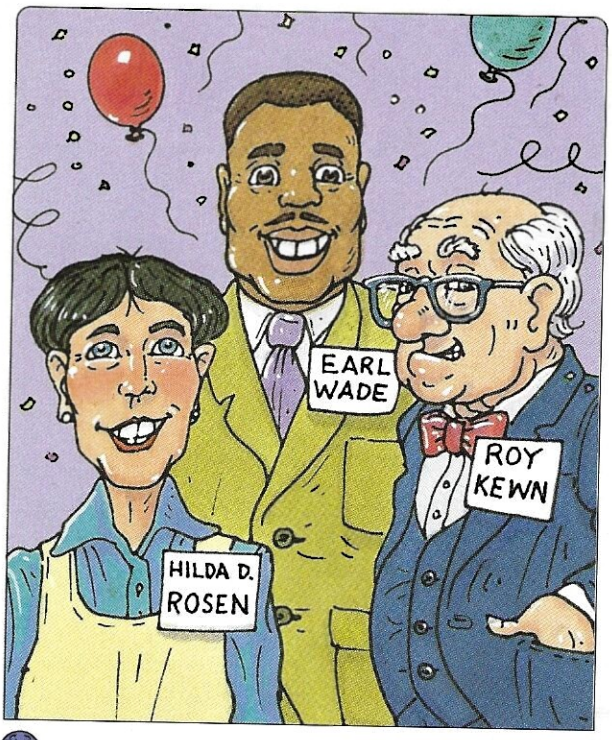
You Win If You Lose...

Uncle Alec's will read that the two remaining heirs, Polly and William, must stage a horse race, and the family inheritance would go to the heir that owned the LOSING horse. The trainer speculated that with these rules, the race might never end. But the art of the deal ran deep in the family veins, and between them Polly and William managed to agree on a plan that would ensure a good, sportsmanlike race. What plan did they decide on to accomplish this?



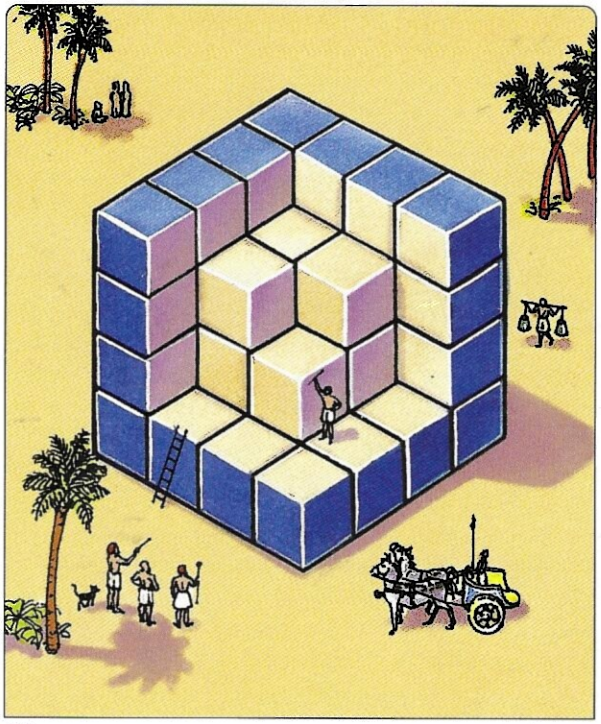
Matched Set...

Kimberly has been told by the jeweler that out of the six earrings he has left, he thinks two are a match. Will Kimberly find a matching pair? If so, which two earrings match?



Convention Chortle...

Hilda D. Rosen, Earl Wade, and Roy Kewn had a big laugh at the convention when they realized that the letters of their names, when rearranged, spelled out the names of each of their home States. From what State does each of these delegates hail?



Blue Painted Cube...

When the monument is finished it will be an enormous cube, painted blue on the outside walls but left unadorned on all inner surfaces. How many of the remaining stones needed to complete the monument will be painted blue on two sides?

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Answer: Polly and William agreed to switch horses.

Here's how: With these rules, each rider would need to beat the mount that was ridden by the other heir in order to collect the inheritance. Remember here that the will refers to the OWNER of the losing horse, not the rider of the losing horse.

Bonus: Which horse race is the second jewel of the Triple Crown? Is it: A. the Kentucky Derby, B. the Belmont Stakes or C. the Preakness?

Answer: The Preakness.

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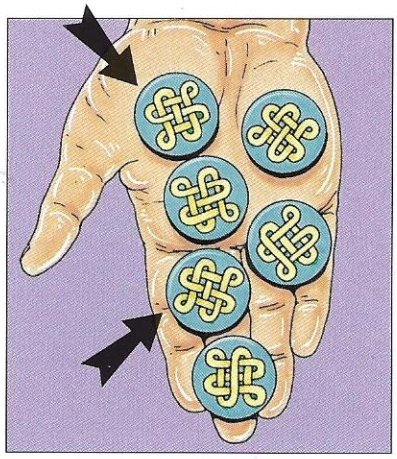
Answer: Yes, there is a matching set as indicated in the illustration below.



Bonus: The ornamental design shown on the earrings was a precursor to the interlacing knot work of the Pictish School of Celtic Art. This particular design is of what origin: A. Turkish, 15th century, B. Persian, 16th century or C. Chinese, 15th century? (You may look at the front of the card to answer this question.)

Answer: Chinese, 15th century. Ming Dynasty.

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Answer: Rhode Island, Delaware and New York.

Bonus: How many times did Adlai Stevenson run for president? Was it: A. one time, B. two times, or C. never?

Answer: Two times... 1952 and 1956.

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Answer: Six of the remaining cubes will be painted on two sides.

Visual Bonus — Do Not Turn Card Over

Bonus: Was the chariot drawn by one horse or two?

Answer: Two.

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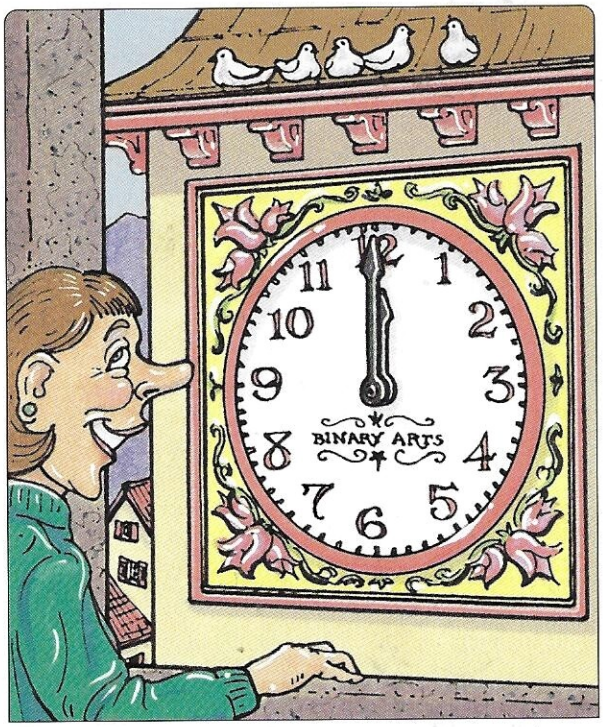
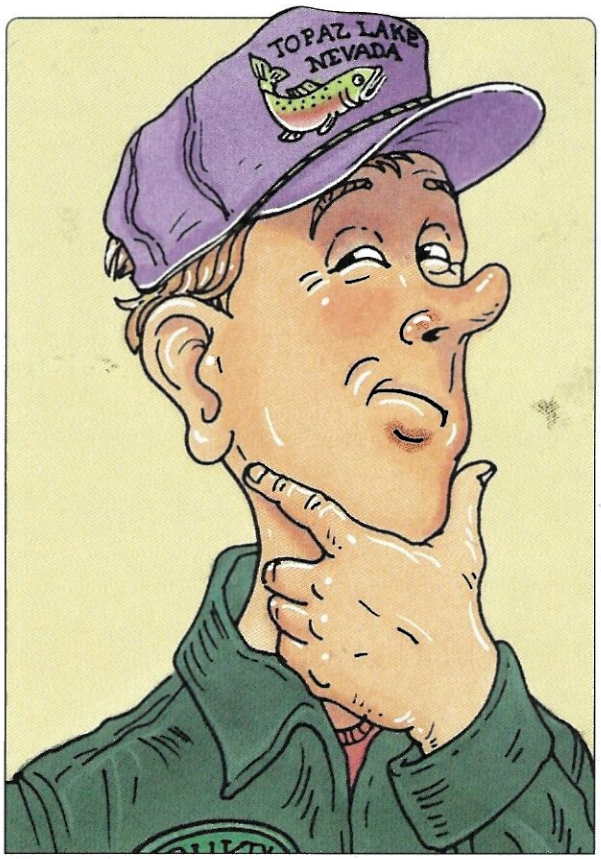


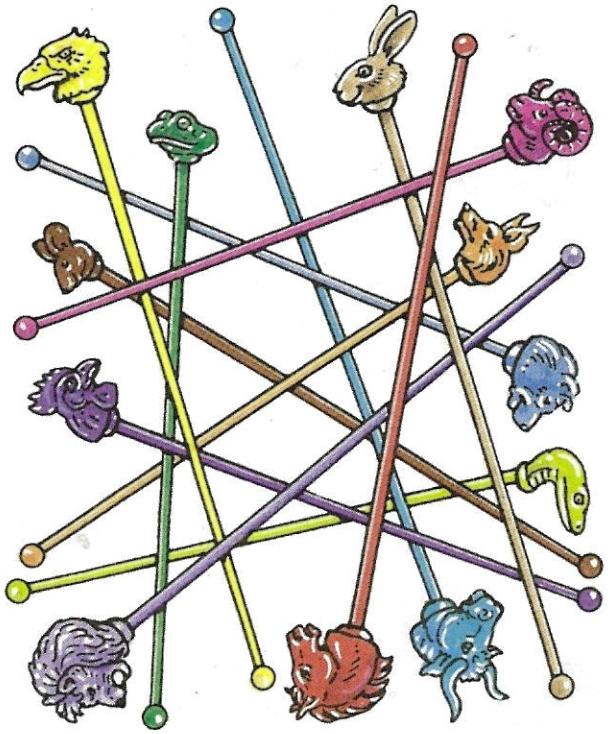
Hour Hand Passings…

It's Mary's first trip to France and her hotel room has a splendid view of the town clock. As the clock strikes 12:00 noon, she giggles and asks her roommate, "How many more times will the minute hand pass the hour hand before 12:00 midnight?" What should her roommate answer?



Word Thoughts…

Buzzy has been asked what four letter word ends in _ E N Y? Can you help him?



Stick Pile Up…

Counting from the top of the pile down, what animal head is on the tenth stick?

Tennis Match…

Frank and Helen's annual singles elimination tennis tournament has drawn 18 players this year. How many matches must be played before there is a winner for the year?

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Answer: Ten.

Here's how: Many people say eleven, the number of times the minute hand will pass twelve during this period. But remember, the hour hand is also advancing with each revolution. For example, the sixth passing revolution will happen when the hour hand is half way between six and seven, not when it is at six proper. The tenth, and last, passing revolution occurs when the hour hand is almost touching the eleven. The hands do not pass again before they meet at the stroke of midnight.

Visual Bonus — Do Not Turn Card Over

Bonus: How many pigeons are roosting on the clock tower roof?

Answer: Five.

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Answer: Deny.

Bonus: Rearrange the letters of the word "live" to make three new words.

Answer: Evil, vile and veil.

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Answer: The tenth stick down is the bull.

Visual Bonus — Do Not Turn Card Over

Bonus: Of the twelve sticks thrown, how many sticks had reptiles on the end?

Answer: Only one... the snake.

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Answer: 17 matches.

Here's how: Every match will produce one loser, and every person other than the winner will lose once and only once. Eighteen players makes seventeen losers; therefore it will take 17 matches to have a tournament winner.

Visual Bonus — Do Not Turn Card Over

Bonus: Who is wearing their socks higher, Frank or Helen?

Answer: Frank is wearing his socks higher.

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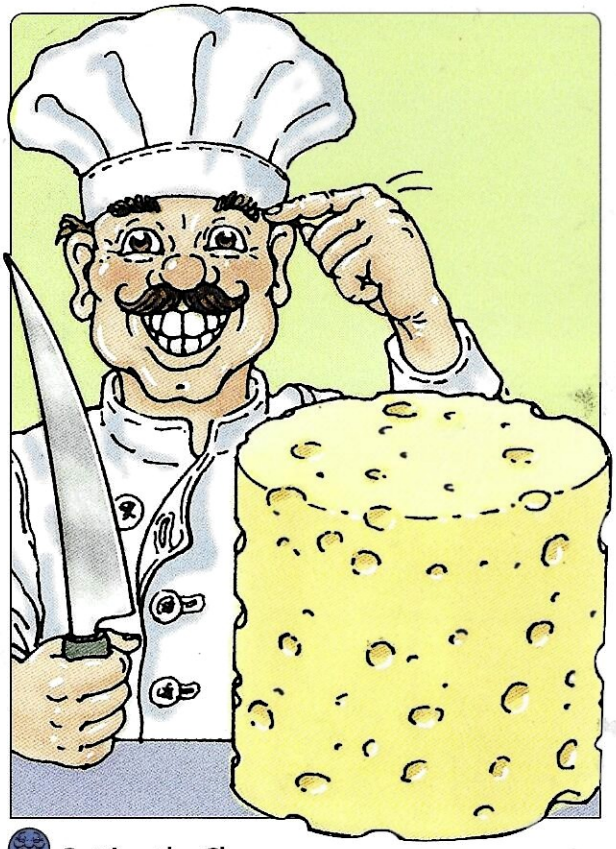
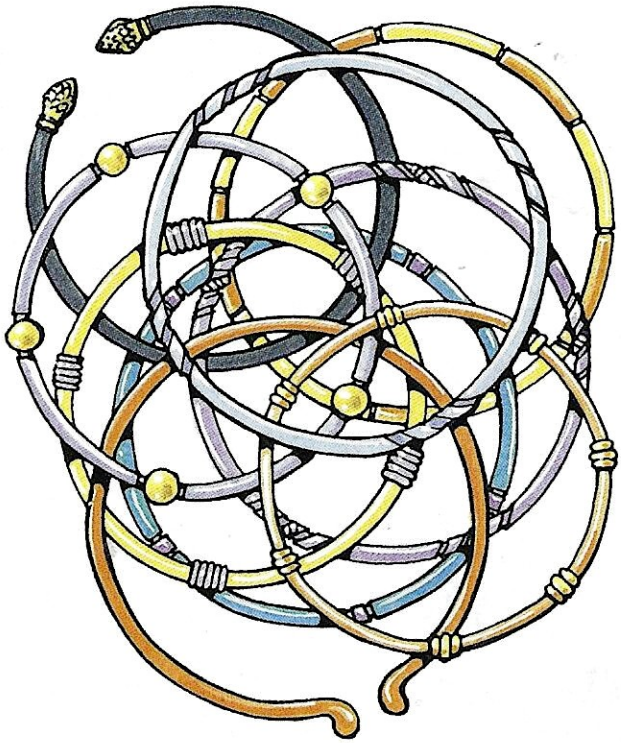
To the Top…

Professor Pith Bugby is looking for the highest spot on this ancient Aztec ruin. If all the stair steps (both up and down) are the same height, can you help him find it?



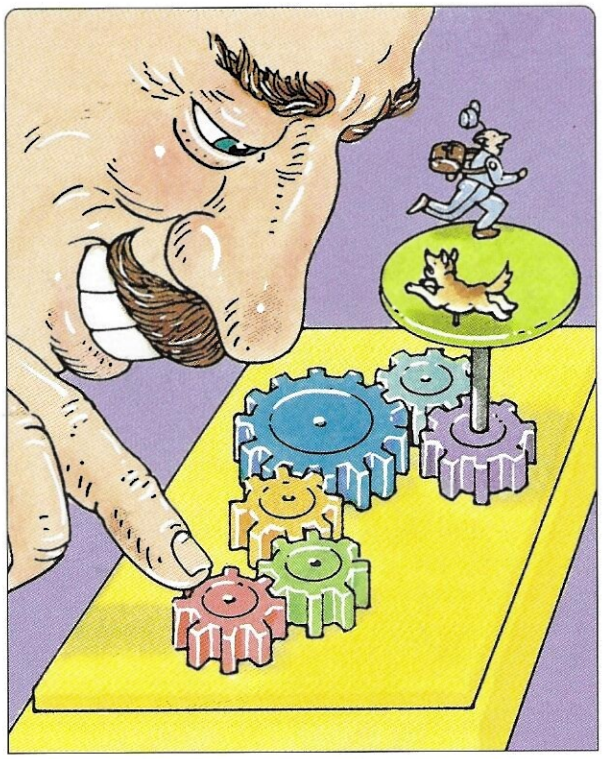
Cutting the Cheese…

Chef Ferdinand claims he can cut the round of cheese into eight identical pieces with only three straight cuts. Can it be done? How?



Bracelet Pile Up…

Kimberly has a pile of bracelets in her jewelry box. In this pile, only two bracelets are linked together. What are the colors of the linked bracelets?



Music Box…

Roland has just finished making a toy music box for his postman. He is about to check the gears. Which direction must the red gear turn to make the dog start chasing the letter carrier... clockwise or counter-clockwise?

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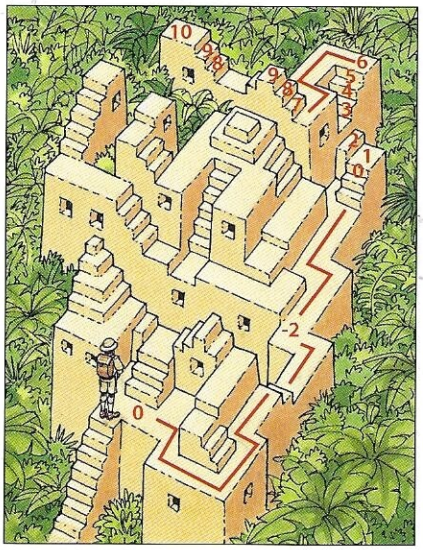
Answer: Ten steps higher than the level Pith starts on is the highest point. That spot is indicated below.



Bonus: The Aztecs were one of the great native civilizations of Central and South America. Name two others.

Answer: Maya and Inca are two. Other answers are possible.

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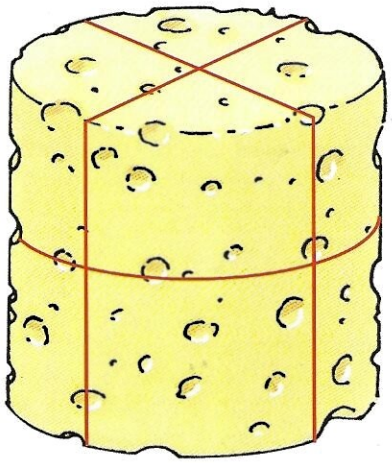
Answer: Yes.

Here's how: The simplest way (not requiring a four piece balancing act) is illustrated below.



Bonus: Chef Ferdinand's favorite cheeses are Roquefort, Camembert and Brie. Which country boasts of their creation? Is it: A. Switzerland, B. France, or C. Denmark?

Answer: France.

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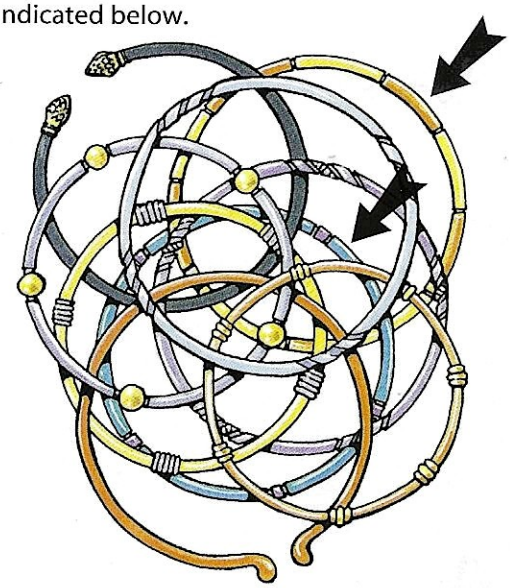
Answer: The two linked bracelets are indicated below.



Bonus: True or false: the first bracelets, often elaborate designs carved in mammoth ivory, were discovered in the graves of Stone Age men and women from approximately 30,000 B.C.

Answer: True.

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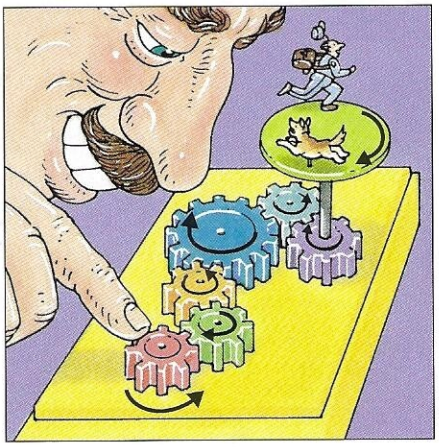
Answer: Counter clockwise.

Here's how: In the illustration below, the arrows indicate the direction the gears will turn.



Bonus: What dog breed is the fastest runner? Is it: A. the Russian Borzoi, B. the Arabian Saluki, or C. the Greyhound?

Answer: The Greyhound, which has been clocked to run as fast as 43.5 mph.

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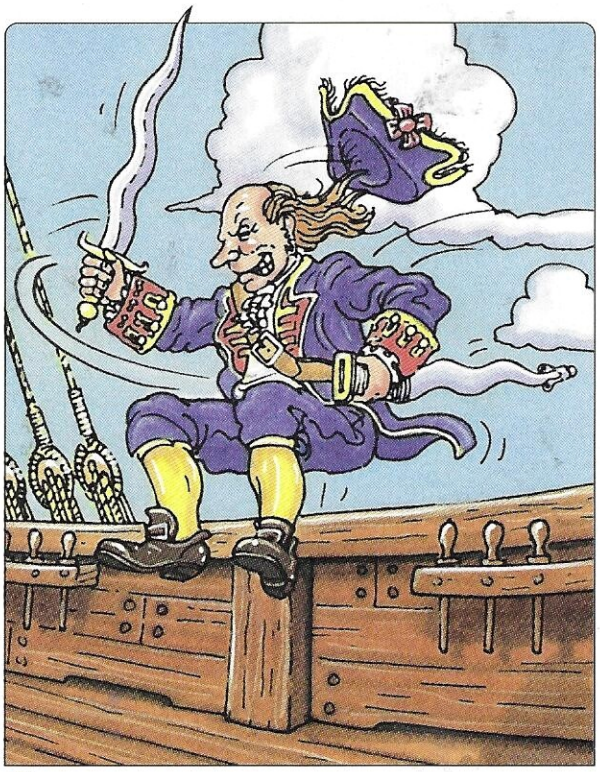
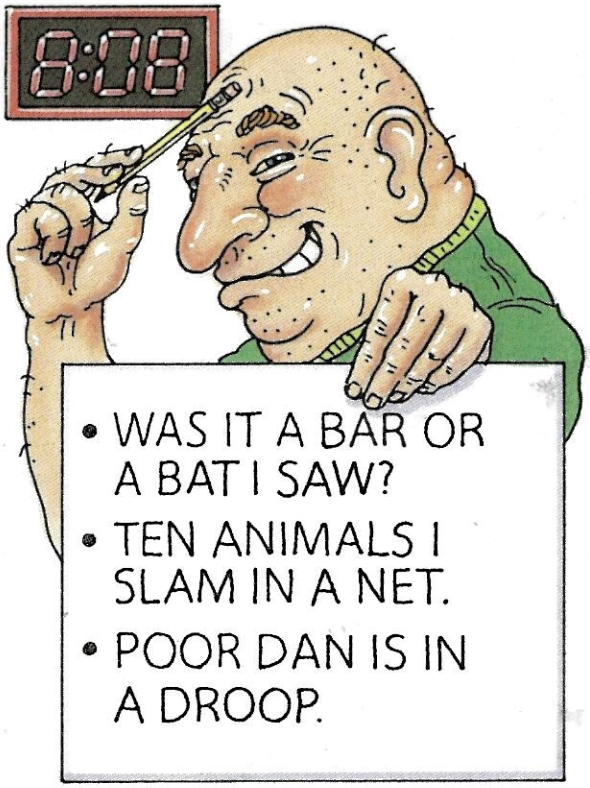


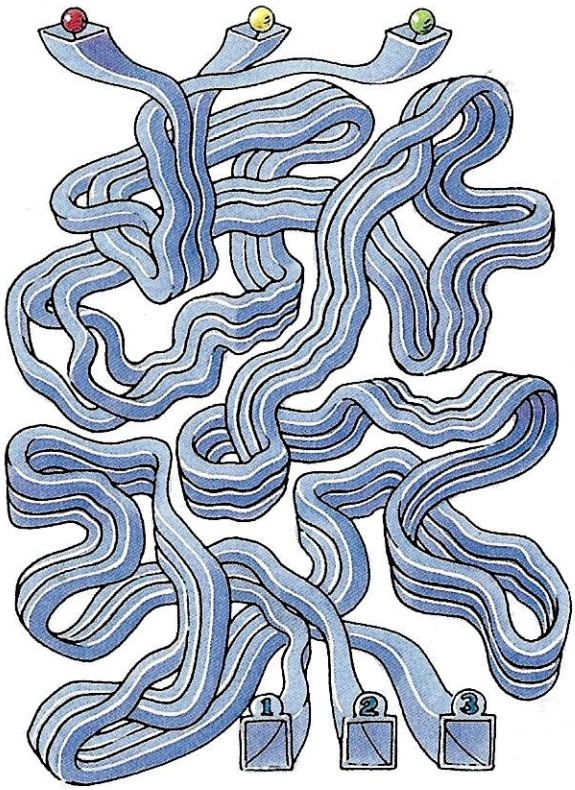
Swordplay…

With the look of a wild man, Captain Willy leaped into the enemy vessel. The crew scattered as the notorious captain drew his most feared serpentine blade from its scabbard… What's wrong with this picture?



Crafty Words…

Percy prides himself as being clever with words. He has just written three sentences. What do they all have in common?



Ball Maze…

Assuming that all three colored balls will roll freely through this maze, what is the color of the ball that will exit from chute number two?

Word Cogitation…

Sylvia the check-out girl is trying to solve a word game in one of the tabloids. It reads, "Loops is to spool as drawer is to… A. contents, B. reward or C. bureau." What is the correct answer?

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Answer: Nothing to fear here. Captain Willy's serpentine blade cannot be pulled from its scabbard because the curves would cause it to lock tight.

Bonus: In pirate parlance, does the "Jolly Roger" refer to: A. A ship, B. A flag, or C. An act of frivolity?

Answer: A flag.

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Answer: All three sentences are palindromes. Palindromes can be words, sentences and even numbers, that are the same when read forwards or backwards.

Bonus: Percy just noticed that his digital wall clock reads a palindrome number… 8:08. Between 8:08 and 9:10, how many other palindrome numbers will Percy see? (include 8:08 in your total) Is it: A. four, B. six, or C. seven.

Answer: Seven… 8:08, 8:18, 8:28, 8:38, 8:48, 8:58 and 9:09.

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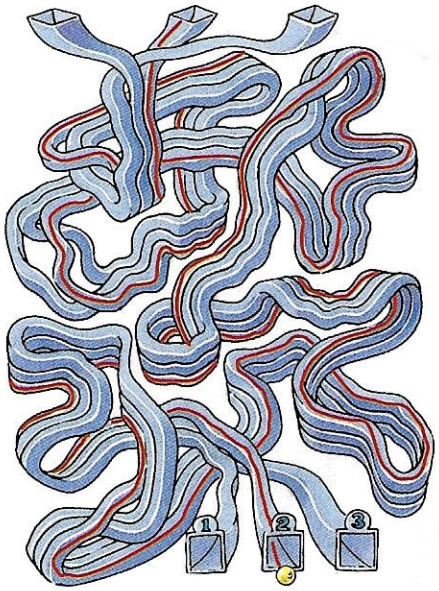
Answer: The yellow ball will exit from chute number two, as illustrated below.



Visual Bonus — Do Not Turn Card Over

Bonus: What are the colors of the two remaining balls?

Answer: Red and Green.

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Answer: The correct answer is reward.

Here's how: The word "spool" has the same spelling as the word "loops", only with the letters spelled backwards. Likewise, try spelling the word "drawer" backwards and see what you come up with… should be "reward".

Visual Bonus — Do Not Turn Card Over

Bonus: Is Sylvia wearing a wristwatch?

Answer: Yes she is.

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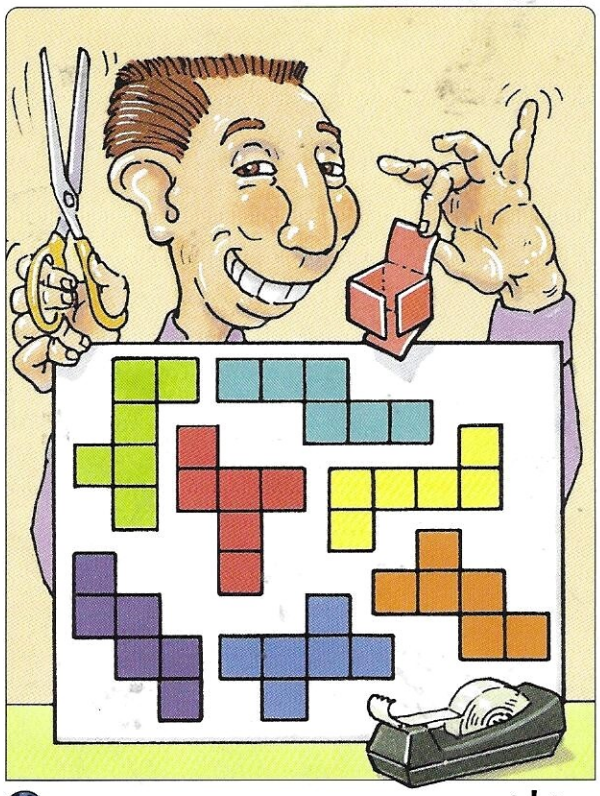
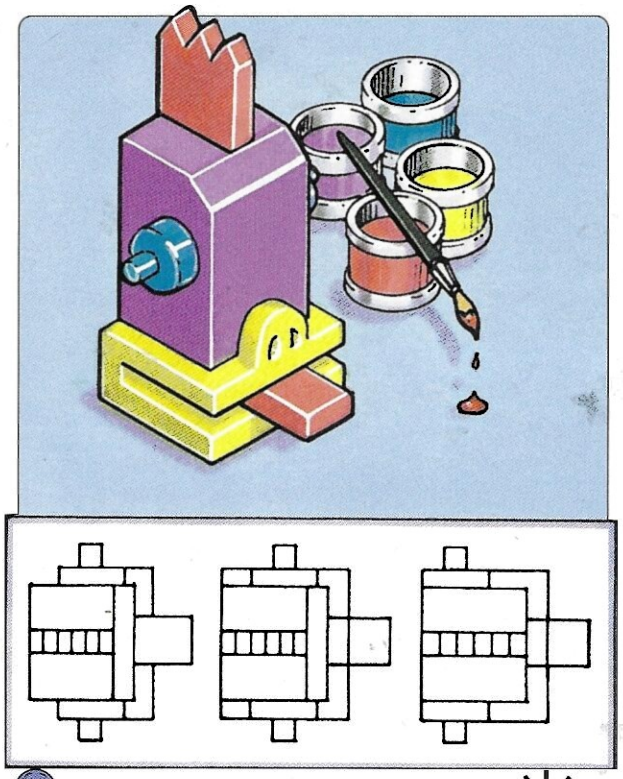


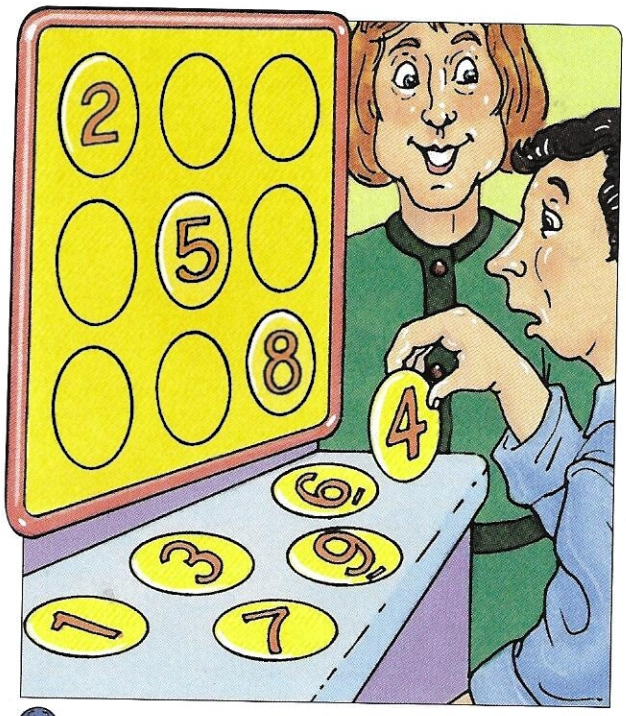
Folding Cubes…

Al is getting ready to cut out these patterns and fold each of them into a cube, assisted only by his roll of scotch tape. Do you think he will be successful with this?



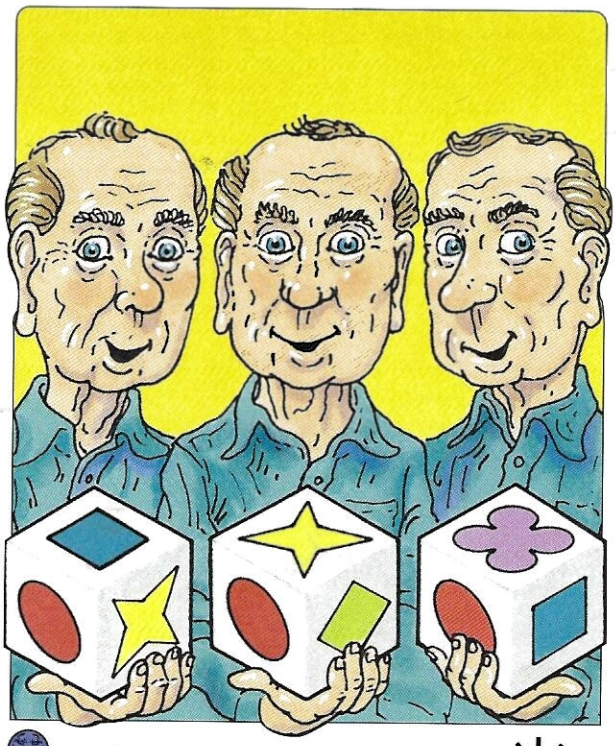
Top View…

Roland has sketched three different top views of a funny face for a new building project. From these three sketches, can you select the top view that Roland chose to make the three-dimensional head illustrated above?



Magic Square…

Mrs. Holderman, the math teacher, has given Johnny a special math problem. He must place the remaining numbers on the wall chart so that the sum of each row and column, as well as both diagonals, is the same. Mrs. H. has already spotted Johnny three numbers. How should he position the rest of the numbers to solve the problem?



Bambeani Blocks…

When the Bambeani triplets were born they each received an identical jumbo birthing block. At age 65, they still have their blocks and if asked, will proudly show them to you. With the visual information shown, can you tell what color is on the bottom face of each block?

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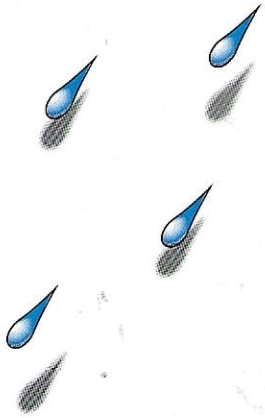
Answer: Yes. Each of these patterns will fold into a cube.



Visual Bonus — Do Not Turn Card Over

Bonus: Not counting the cube in Al's hand, how many cube patterns were on the sheet of paper he was about to cut?

Answer: Seven.

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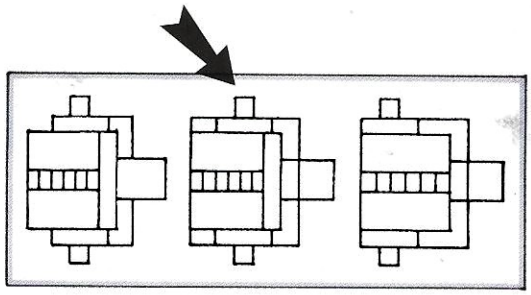
Answer: The correct top view is indicated below.



Visual Bonus — Do Not Turn Card Over

Bonus: What was the last color Roland used to paint his head?

Answer: Red... (note the paint still on Roland's brush.)

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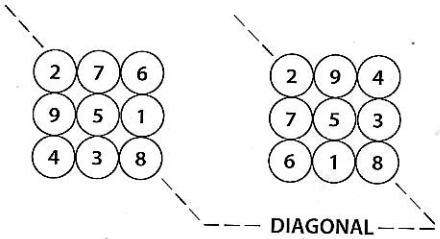
Answer: The two solutions (which are diagonal reflections of each other) are shown below.

Here's how: Mrs. Holderman's three hint numbers add up to 15, so all columns and diagonals must add up to 15. Neither the 9 nor the 7 can go into a row with the 8, since this would force the row totals to be more than 15. When they are placed in either of the two remaining positions, the rest of the solution consists of filling in the blanks.



Bonus: What is 50 divided by 1/2, plus 10?

Answer: 110. Fifty divided by one half equals one hundred, then add ten more.

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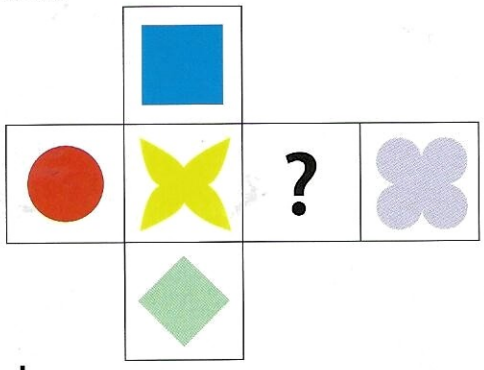
Answer: The color on the bottom face of each block starting from left to right is... Green, Purple, and Yellow. Treating a Bambeani Block as an unfolded flat cube pattern, it is interesting to note there is also one cube face that is impossible to determine from the visual information shown.



Visual Bonus — Do Not Turn Card Over

Bonus: The Bambeani triplets are big fans of Frank Sinatra. What do all three triplets share in common with Frank?

Answer: They all have blue eyes. (Other correct answers are also acceptable.)

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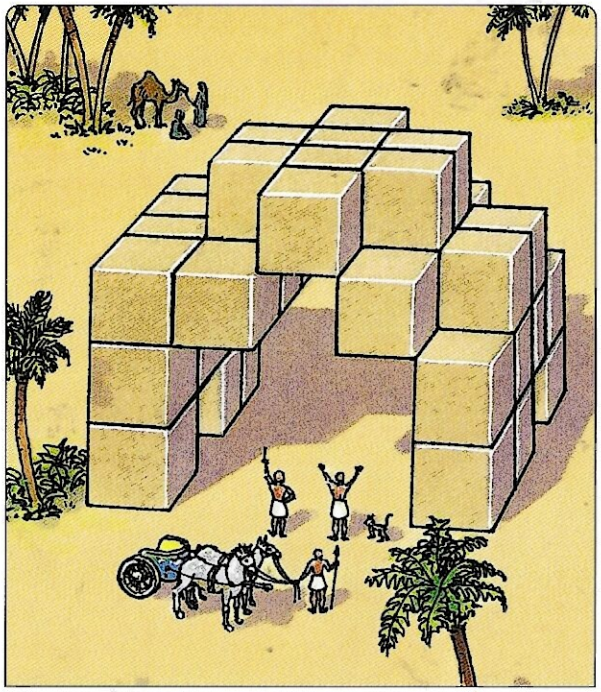
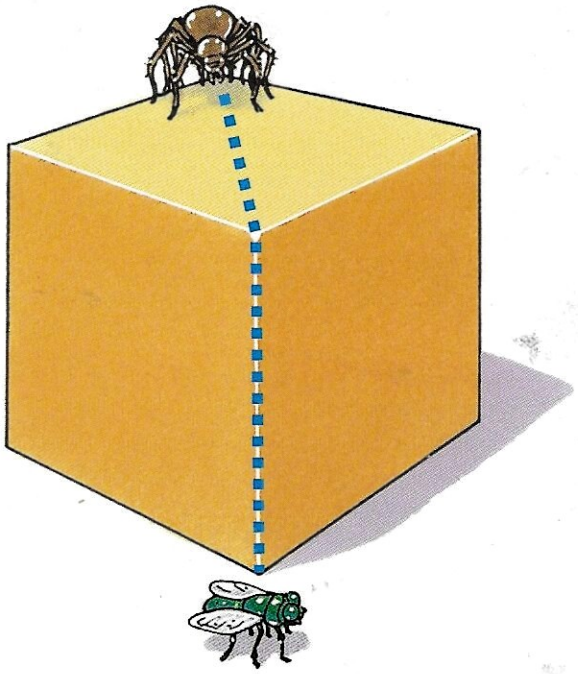


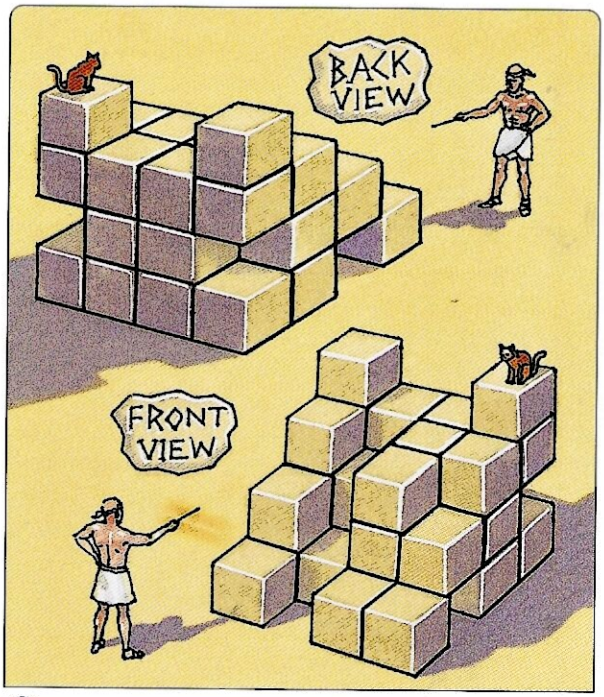
Duplicate Count…

The stone cutter has been asked by the Pharaoh to duplicate this monument at a new location. His first task is to make an accurate count of the individual cubes within the existing structure. How many cubes are there in the monument? (Note: please assume that all rows of cubes are solid unless you can observe gaps or endings.)



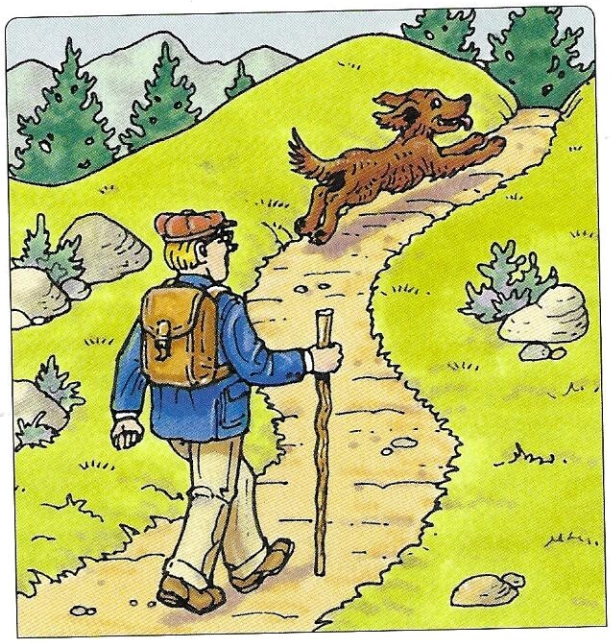
Shortest Catch…

The spider is hungry and impatient. Her plan is to charge the fly, following a path along the dotted line as shown. Is this the shortest possible route for the spider to reach the fly?



Counting Cubes…

The stone cutter and his cat are trying to count the number of cubes that have already been placed in this monument. Can you determine the total number of cubes contained in this structure, based on seeing these front and back views and armed with the knowledge that it is not in any way hollow?



Tireless…

George and his faithful dog Alf are comin' in, hiking along at a steady three miles per hour. Just as they are six miles out, Alf takes off for home, loping along at a steady seven miles per hour. Immediately upon reaching the cabin he reverses course, and then runs continuously back and forth until George reaches the front door himself. To the nearest mile, how far did Alf run during his dash from mile six?

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Answer: There are 36 cubes in the monument.

Bonus: In ancient Egypt, cats were considered to be symbols of evil, endowed with supernatural powers and direct agents of the devil. True or false?

Answer: False. In ancient Egypt, cats were the living embodiment of the goddess Bast and were GREATLY revered.

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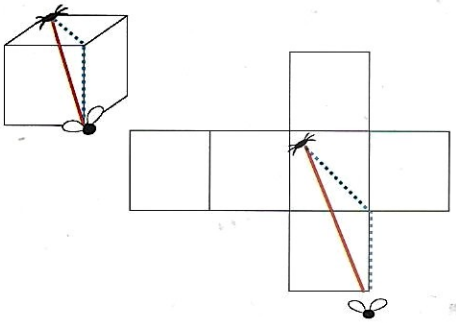
Answer: No. The shortest route would not follow along the edge of the cube.

Here's how: To picture the shortest route, imagine the cube to be unfolded into a flat pattern. If you now draw a straight line from the spider to the fly you will clearly see that this path is shorter than crossing the diagonal and going down the edge of the cube.



Bonus: The short life cycle of the fruit fly (often less than two weeks) has made it a valuable resource to scientists in their studies of inheritance. True or false?

Answer: True.

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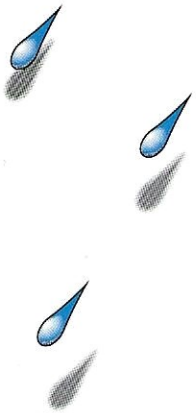
Answer: There are 32 cubes in this structure.



Visual Bonus — Do Not Turn Card Over

Bonus: As the stone cutter counts the cubes, is his back to the sun or is he looking into the sun?

Answer: He has his back to the sun… (note the shadow lying in front of him).

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Answer: Alf ran approximately fourteen miles.

Here's how: George is hiking at three miles per hour, and has to cover six miles home… it will take him two hours to get there. Given that Alf is running steadily at seven miles per hour during these two hours, he covers two times seven, or fourteen miles altogether.

Bonus: At an elevation of 10,000 feet, do eggs take longer or shorter to hard boil than at sea level?

Answer: A longer time. Air pressure is lower in higher elevations, which causes water to boil at a lower temperature than at sea level. The eggs will cook more slowly at the lower temperature.

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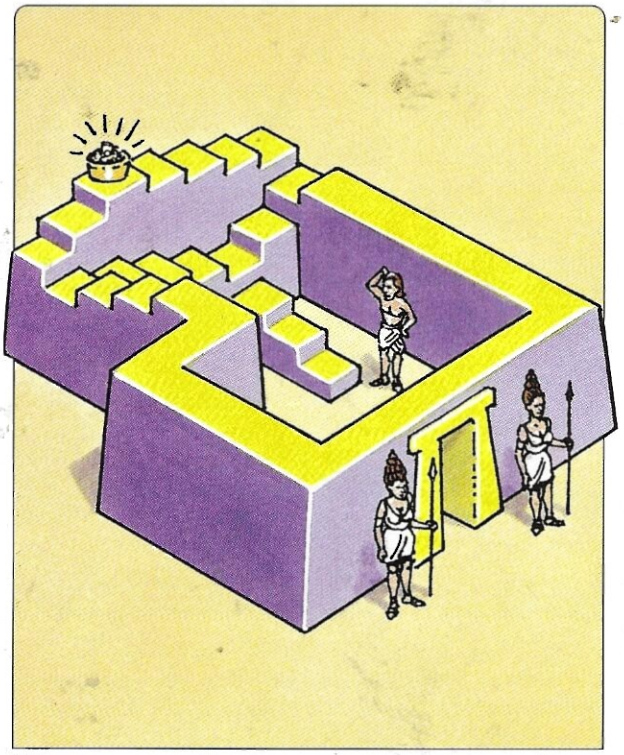
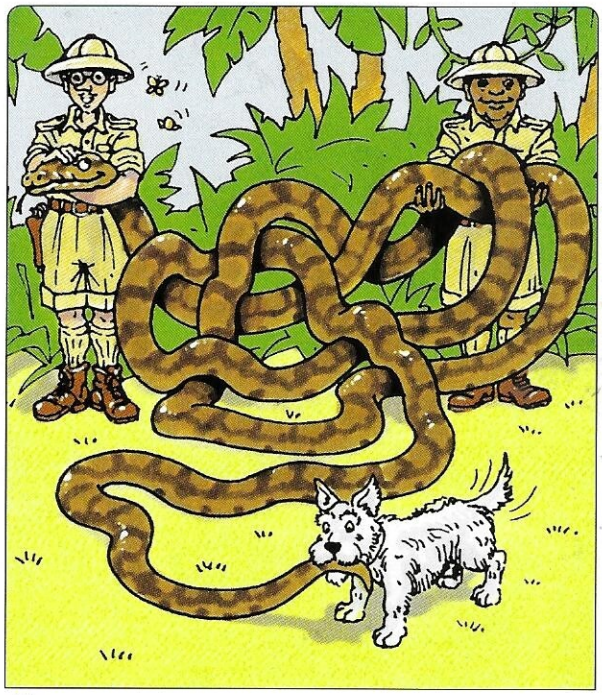


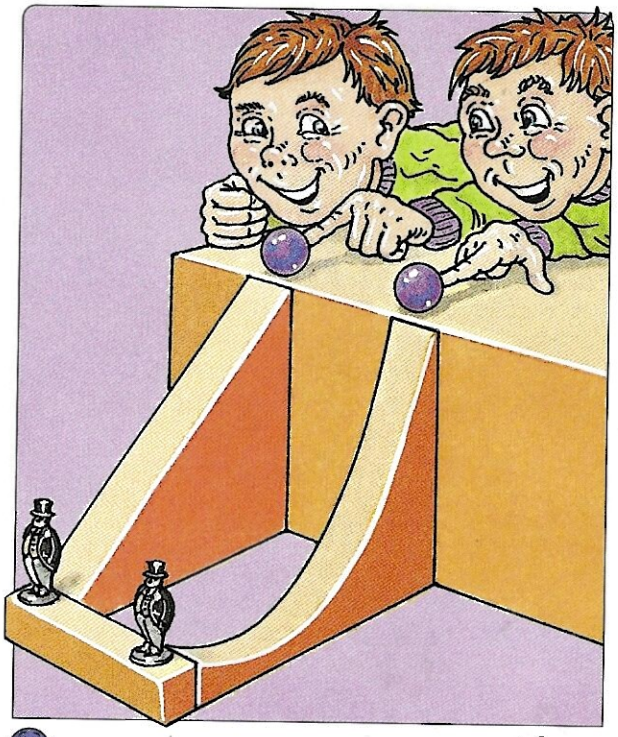
Upward Climb…

Mighty Taius Taborus has been ordered to perform another labor: He must reach the top of the staircase by climbing up no more than ten steps. If he succeeds, the treasure will be his… fail, and he dies. Will he make it? Yes, or no.



Snake Stretch…

Professor Pith Bugby, his fearless pooch Vilmer, and Professor Motu have subdued a mighty python. As Pith holds the head, Vilmer is given the command to pull the tail and stretch out the snake for measuring. Assuming that the snake cooperates fully in this endeavor, will there be any problems with taking an accurate measurement?



Crash Course…

The Tucker boys, Jack and Dave, release identical steel balls down their respective tracks at exactly the same time. Jack's track is straight, while Dave's is cycloidal in shape. Will the balls hit their targets at the same time, or will one of them hit the target first? If the latter, which ball?

Greetings…

At the Social everybody shakes hands only once with every other person. Altogether there are 15 handshakes. How many people attended the Social?

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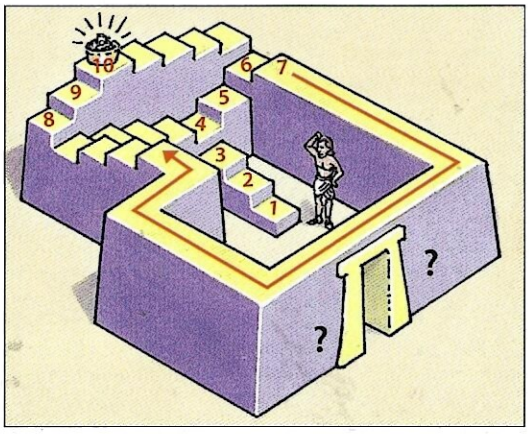
Answer: Yes.

Here's how: Taius has a limit on the number of steps he can climb up, but not on the number of steps he can climb down. He can successfully climb UP ten steps and reach the treasure by following the path illustrated below.



Visual Bonus — Do Not Turn Card Over

Bonus: Are the spear-toting gatekeepers men or women?

Answer: Women.

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Answer: Yes there will… the snake won't be able to stretch out fully because there will be a knot in its torso.

Bonus: The Gaudy Commodore is: A. a blue throated bird in the Thrush family known to winter in the Asian tropics and summer as far north as Siberia, B. a favorite cocktail among navy officers, or C. a beautiful butterfly found in the wooded localities of tropical and southern Africa. Which one?

Answer: The Gaudy Commodore is a beautiful butterfly found in the wooded localities of tropical and southern Africa.

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Answer: The ball on the cycloidal path will hit the target first.

Here's how: The ball on the cycloidal path speeds up more rapidly than the ball on the straight path in the early part of its descent, and its momentum keeps it ahead as it rolls up the last lip. Scientists have put a great deal of time into understanding these shapes, and have determined that the cycloidal creates the fastest track.

Visual Bonus — Do Not Turn Card Over

Bonus: What action figure are the Tucker boys about bowl over? Is it: A. Leonardo the turtle, B. the White Ranger, or C. Sir Topham Hatt?

Answer: C. Sir Topham Hatt.

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Answer: Six people attended the Social (a rather poor showing).

Here's how: Let's watch as they come in one at a time. The first person to arrive (person A) has no one to shake hands with. The second person (person B) has one person to greet. The third person (person C) has two people to greet, and that makes three handshakes so far. Now just keep going. Person D greets three people (for a total of 6 handshakes), and person E greets the first four people (now we have 10 handshakes). Person F is the last one in, says hello to the five folks already there, and that makes 15 handshakes altogether.

Bonus: If a bottle of pop costs 50¢ more than the deposit and the cost including deposit is 60¢, how much does the drink cost?

Answer: The pop costs 55¢. The deposit is 5¢.

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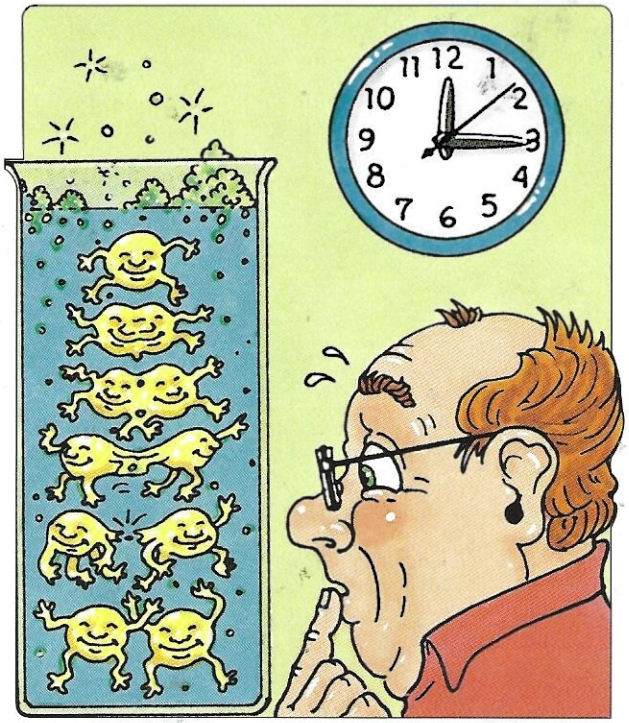
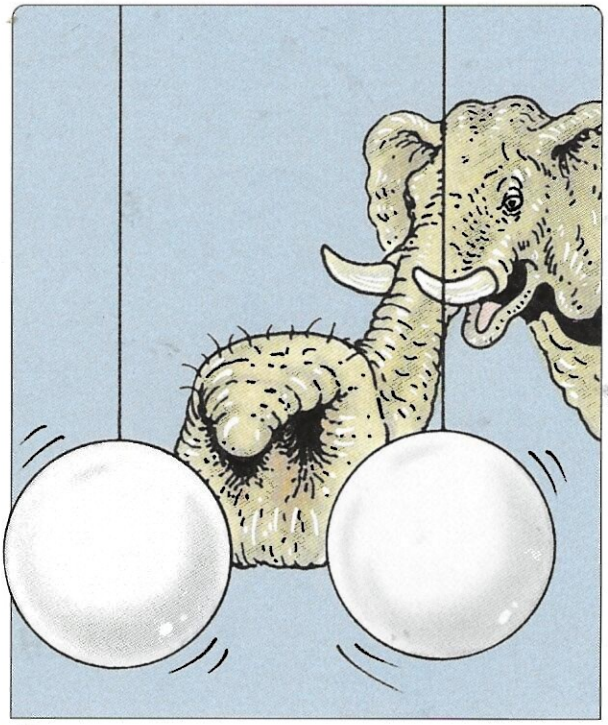


Amoebae Troubles…

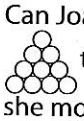
Every minute the cellular creature splits in two halves, each one immediately growing to the same size as the parent. In 60 minutes the multitude of amoebae completely fill their container. To the nearest minute, how much time was needed to half-fill the container?

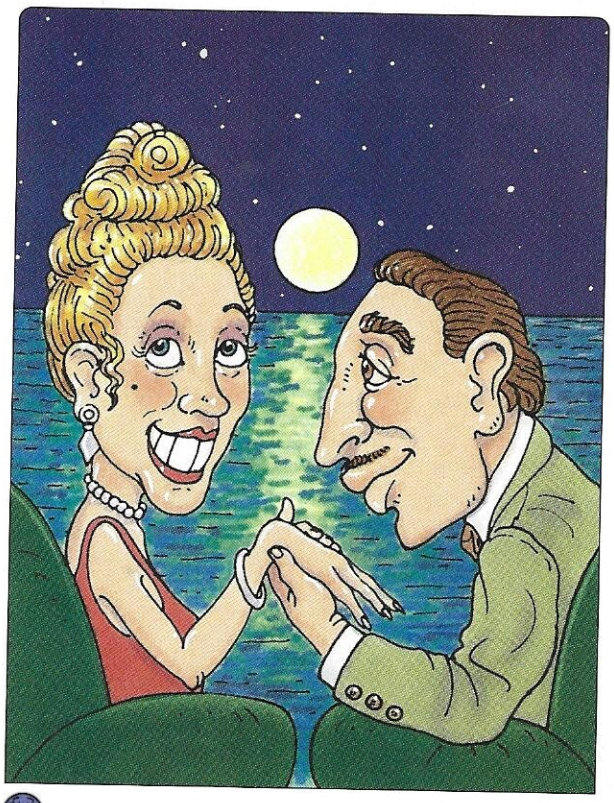


Gentle Blow…

Two ping-pong balls are suspended as shown, about an inch apart. Can you tell what will happen when Jumbo the elephant gently blows between the two balls? (Please assume that Jumbo can blow a single gentle stream of air, which is not turbulent or otherwise complex.)

Upside-Down Coin Stacks…

Can Joan arrange this pattern of coins from  to by moving only three coins? The only rule is that every time she moves a coin to a new position, it must touch two other coins.



Moonshine…

"It was nearly midnight, and the full moon was just rising over the ocean. He held her hand, gazed deeply into her eyes, and whispered…" What is wrong with this statement?

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Answer: 59 minutes.

Here's how: Remember the creatures double in number every minute. Therefore, the container would have been half-full one minute before it became completely full. Between minute 59 and minute 60 the creatures doubled their space and the container went from half-full to full.

Visual Bonus — Do Not Turn Card Over

Bonus: What time is the clock in the laboratory showing?

Answer: 12:15.

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Answer: The two balls will come gently together.

Here's how: When Jumbo blows, the air between the ping-pong balls moves, which lowers the air pressure between the balls (there are fewer molecules in a given volume of air when it is moving than when it is still). The higher air pressure on the outside of the balls thus pushes them in towards each other.

Bonus: Which elephant has the bigger ears; African or Asian?

Answer: The African elephant.

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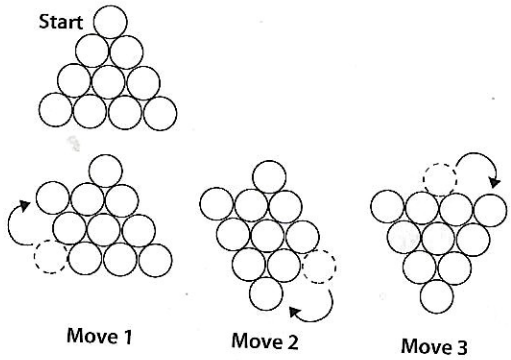
Answer: Yes, three moves will do the trick.

Here's how: First draw a triangular border around the stack of coins. Next turn it upside-down so that it encloses the maximum number of coins, and fill in the open spaces by moving the coins from outside the border to inside the border. The smallest number of coins for this transfer will always be: the number of coins divided by three, ignoring the remainder.



Bonus: Whose face appears on the U.S. nickel?

Answer: Thomas Jefferson (1743–1826). The third president of the United States.

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Answer: The full moon rises at sunset, not at midnight.

Here's how: What is actually happening is that when the moon is on the opposite side of the sun in relation to the earth (coming up while the sun is going down), sunlight from the entire moon surface is reflected back towards the earth, so we see the moon as a full round ball of light. When the moon comes up on our horizon at midnight, only half the light of the moon reflects towards earth; the rest of the lighted surface faces away from the earth. Thus our friends would see a half moon rising at midnight, not a full moon.

Bonus: The first astronomer to describe the true rotation of the planets around the sun was: A. Ptolemy, B. Copernicus, or C. Galileo?

Answer: Copernicus, in 1530.

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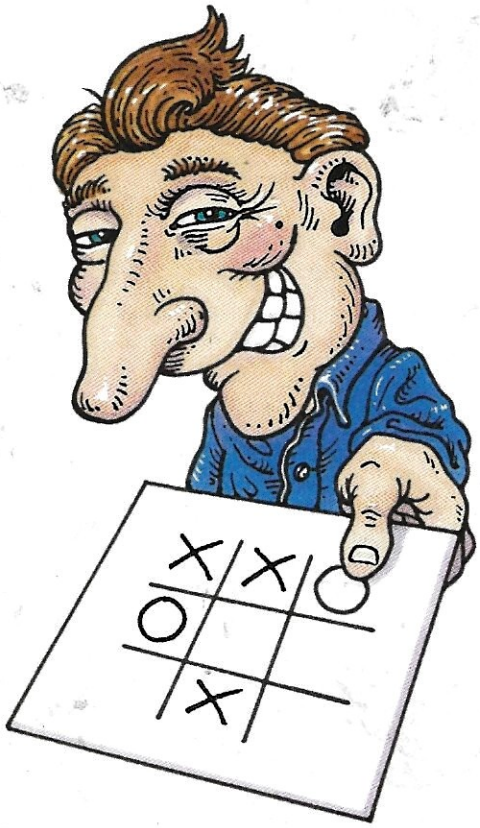
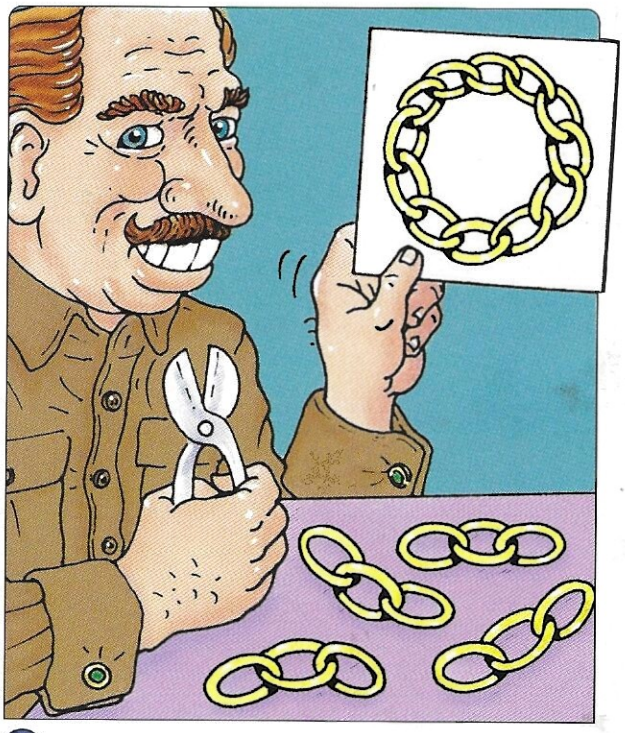


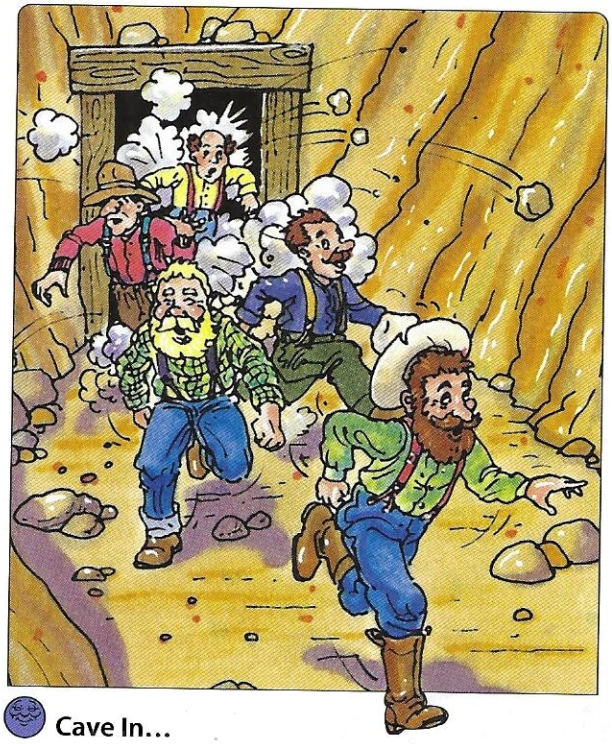
A Special Tic Tac Toe…

In Arnold's Tic Tac Toe, three in a row loses! You are playing the "O"'s and it is your turn. What move can you make to force Arnold to end up with three "X"'s in a row, so he loses?



Bracelet Links…

Roland is making a bracelet, as shown in this drawing. He has four sections of chain to link together. It takes 15 minutes to cut open a link and weld it back together, and thus he would like to cut as few links as possible. How quickly can Roland complete the task?



Cave In…

Five miners charged out of the shaft as the timbers crashed behind them. Jeb was not the first out. Cain was neither first nor last. John Henry pushed out immediately behind Jeb. Preach wasn't second out. Zane was two men behind Preach. In what order did the men race from the mine?

Missing Page…

As Mr. Hackett picks up his morning paper, one of the pages slips out. Simply by seeing the two numbers on the pages facing you, can you deduce how many pages are in the whole paper?

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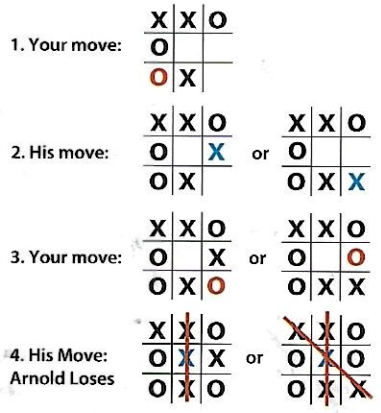
Answer: You should place your "O" in the bottom left hand corner. Any other choice will end in a tie.

Here's how: Shown below are all Arnold's move options. No matter how he plays to counter your skillful move, he will lose.



Bonus: What is the first number that when spelled out, has all the letters in alphabetical order? Start with "zero" and consider only whole numbers in ascending order.

Answer: Forty.

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Answer: It will take Roland 45 minutes to complete his task.

Here's how: Roland needs to cut one of the three link sections into its individual links. Using the three loose links he can join the three remaining sections together. Taking 15 minutes to cut and weld each of the three links, Roland will need 45 minutes to finish (3 x 15 = 45).

Bonus: Three of Roland's heroes were Faberge, Tiffany and Cartier. What did all three men have in common? Were they: A. modern clothing designers, B. European jet-setters, or C. 19th century Master Jewelers?

Answer: All three were famous Master Jewelers in the 1800s.

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Answer: Preach was first; Cain was second; Zane was third; Jeb was fourth; and John Henry was last.

Here's how: Based on the question we can establish; Jeb, Cain, John Henry and Zane were not first; therefore, Preach must have been first. Immediately, Zane was third. If John Henry was right behind Jeb, then they must take the only two adjacent spots, fourth and fifth. Cain finally settles into the only remaining open spot, second place.

Bonus: What did James Wilson Marshall discover at Sutter's sawmill in Coloma, California, on January 28, 1848? Was it: A. silver, B. gold, or C. his bride-to-be?

Answer: It was gold, and there began the California Gold Rush of 1849.

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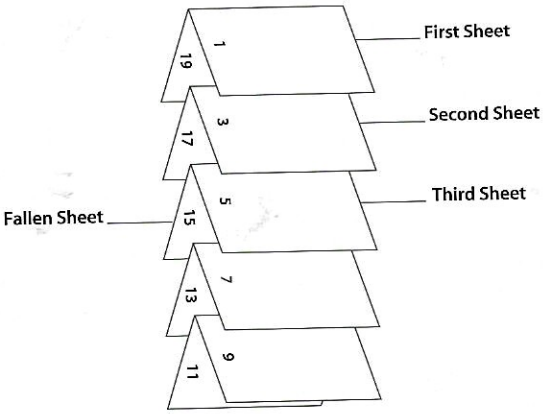
Answer: The Gazette has 20 pages.

Here's how: Page 5 represents the third sheet into the paper, and therefore the third sheet from the end. Observing the 15 on the inside of the sheet allows you to imagine the "16", then skip two down to the "18" and the "20".



Visual Bonus — Do Not Turn Card Over

Bonus: What great Binary Arts brainteaser puzzle is illustrated on page five?

Answer: TripleCross™ The world's best sliding block puzzle!

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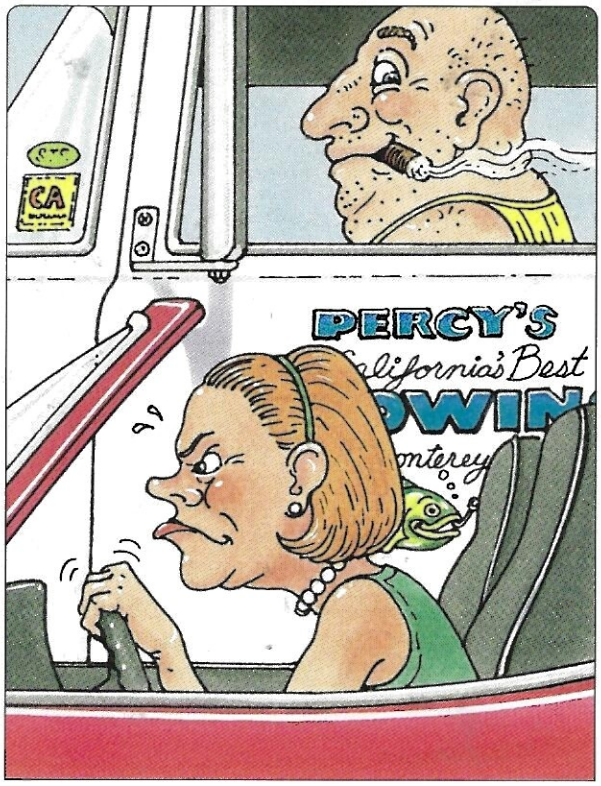
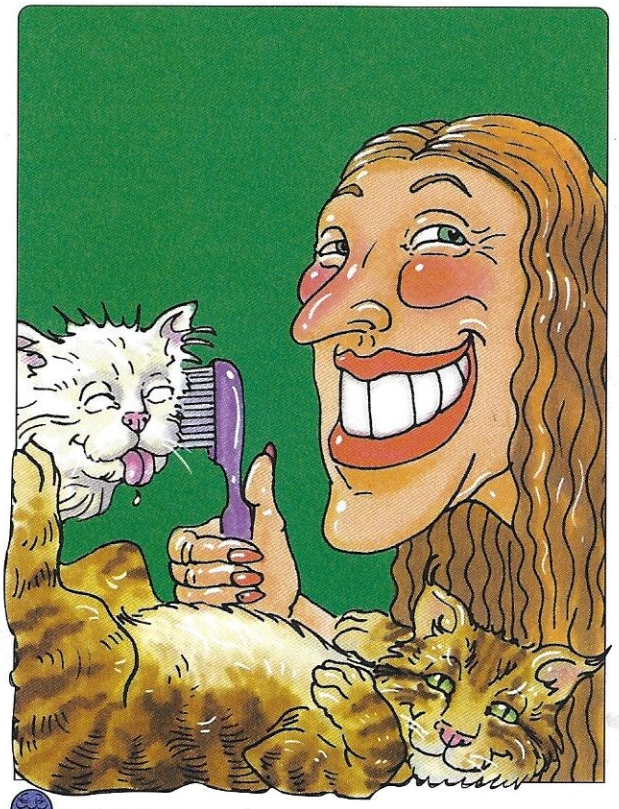


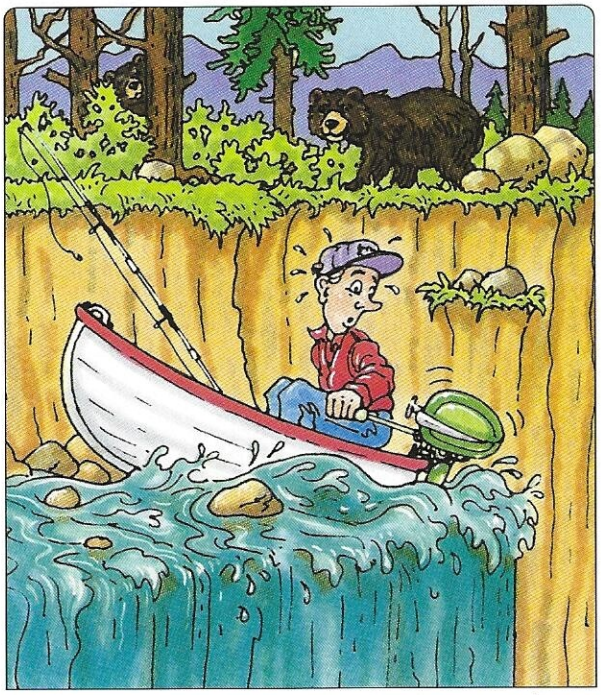
Traffic Woes…

Lauren drove the 50 miles to the coast at 50 mph, but got stuck in traffic and averaged 25 mph on the way back. What was Lauren's average speed for the round trip?



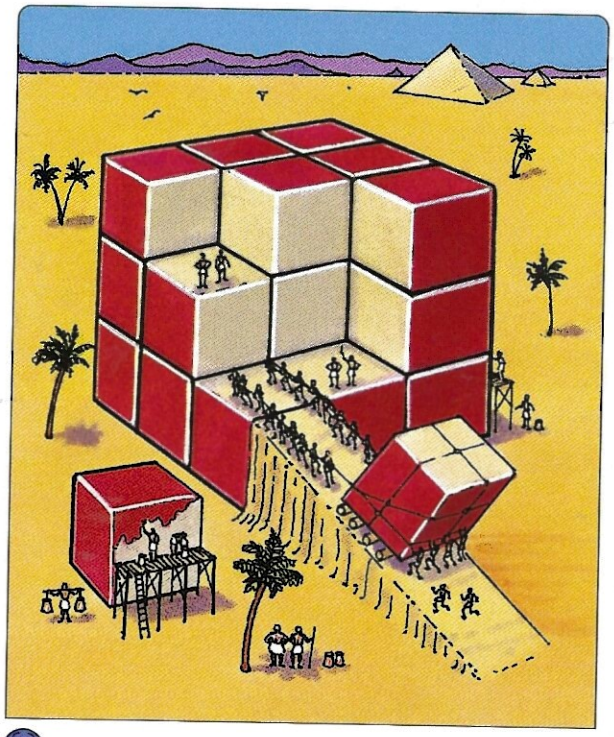
Cat Count…

Wendy has cats. All but two of them are Siamese, all but two of them are Persian, and all but two of them are Maine Coon. How many cats does Wendy have altogether?



Bad Current…

Oh no! Buzzy's powerboat is caught in the current and is being sucked towards the waterfall. The boat can run at 16 mph, but the current is pulling him towards the falls at 9 mph. Buzzy's motor uses 5 gallons of gas an hour, he has 16 gallons left and the first safe landing is 21 miles back up river. Will he make it?



Red Painted Cube…

The Pharaoh has ordered that a Cube Tomb should be built from 27 smaller cubes. He has ordered that the entire outside surface of the cube (including the bottom) be painted red. When the tomb is complete how many of the smaller cubes will be painted red on two sides only?

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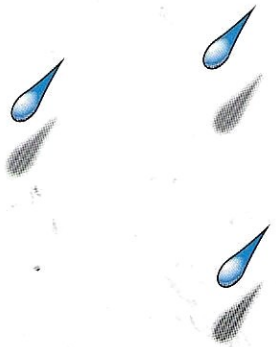
Answer: Lauren's average speed for the round trip was 33 1/3 miles per hour.

Here's how: Figure it this way… she took one hour to get to the coast, but took two hours to return (50 miles at 25 mph). Overall she drove 100 miles in three hours, thus averaging one-third of 100 miles, or 33 1/3, miles per hour.



Visual Bonus — Do Not Turn Card Over

Bonus: Was Lauren traveling on the east coast or the west coast? (Hint… recall the logo on the truck.)

Answer: The west coast.

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Answer: Altogether, Wendy has three cats.

Here's how: Two of her cats are not Siamese, though one is. Two cats are not Persian, but one is. Two cats are not Maine Coon, but one is. That adds up to three cats, one of each breed.

Bonus: True or false… the Maine Coon cat breed originated from the mating of semi-wild domestic cats and raccoons.

Answer: False and biologically impossible. The Maine Coon, or Maine Cat, is the oldest recognized natural breed of North America. Although having markings quite similar to raccoons, most likely the breed originated in crosses between early Angoras (a Turkish breed, perhaps introduced by New England seamen) and short-haired domestic cats.

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Answer: Yes.

Here's how: Chugging along at 16 mph with a current drag of 9 mph gives Buzzy a net progress of 7 mph. At this speed, he can reach the safe landing 21 miles up river in exactly three hours. Given that Buzzy's old outboard guzzles gas at 5 gallons per hour, his 16 gallons will give him power for just over three hours. In fact, at the three hour mark there will be a single gallon of gas left, a reasonable safety margin for Buzzy to ease into the harbor for a fill-up and a pop.

Visual Bonus — Do Not Turn Card Over

Bonus: How many bears spotted Buzzy as he approached the waterfall?

Answer: Two bears are watching.

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Answer: 12 cubes will be painted red on two sides only.

Bonus: How many cubes will be painted red on one surface only?

Answer: Six.

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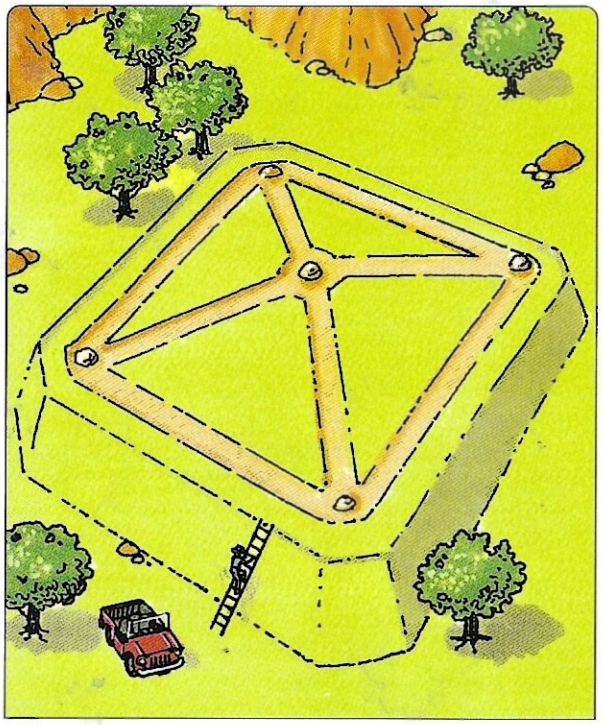
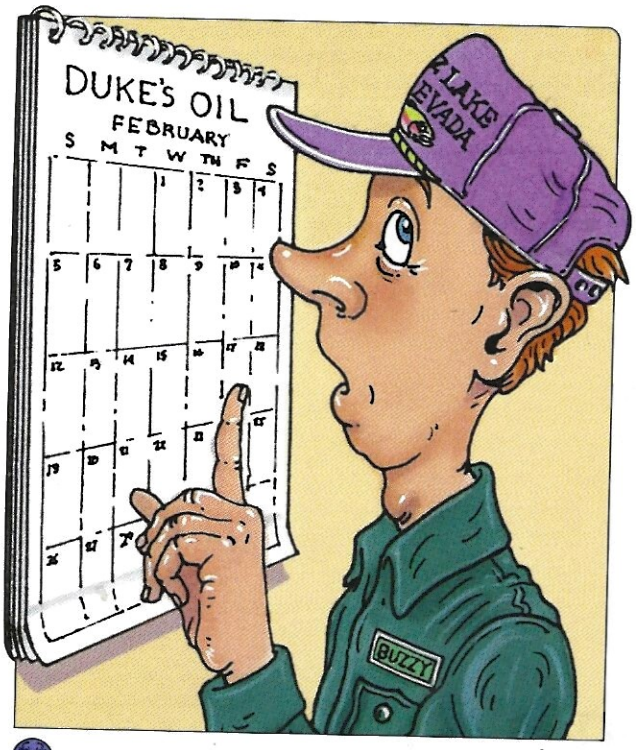


Efficient Explore…

Ruth Perkins the archeologist has arrived at the ancient mound of St. Stephen. Is there a spot on the path where she can begin her exploration and follow the entire path without retracing any of her steps? (Crossing her path is ok.) If so, where should she start?

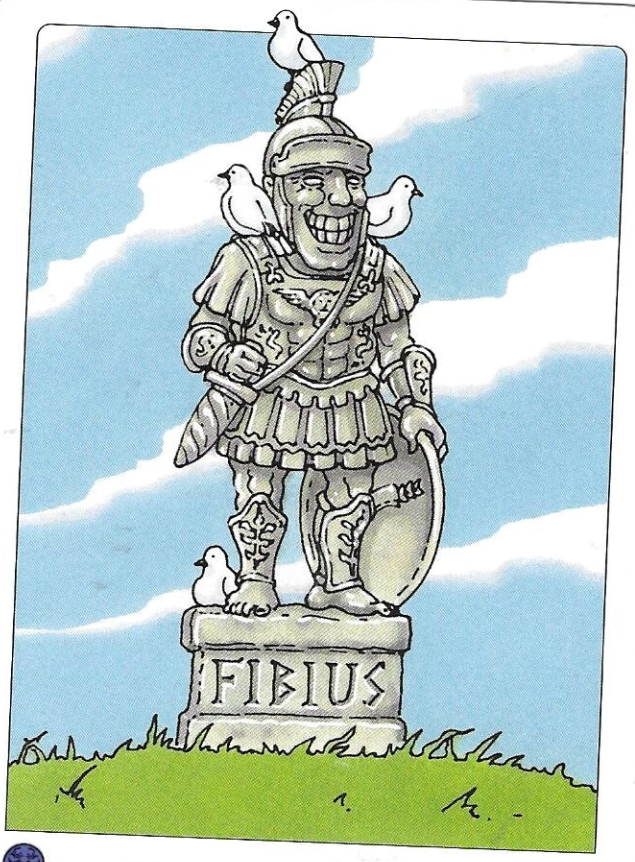
Red Square Fold and Cut…

Blanche runs a quilting class. She has asked her students to fold and cut a red square of fabric, following the pattern shown on the chart above. The results are in. Which of the four students' squares is the correct fold and cut as indicated by the chart?



Calendar Confusion…

Buzzy showed up for work on Monday only to discover that his delivery truck was in the shop for maintenance. He was told it would be ready two days after the day before the day after tomorrow. On what day can Buzzy expect the truck to be back on the road?



How Old…

Drill sergeant Fibius was born on the 256th day of 20 B.C. and died on the 24th day of 20 A.D. How old was Fibius when he died?

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Answer: No. This path is impossible to explore without Ruth retracing at least some of her steps.

Here's how: At each corner, three paths come together. Passing through a corner uses up two paths; but that leaves one path remaining at each of the four corners for starting or for stopping, and Ruth can have only one starting and one stopping point. So, no matter where she starts, Ruth will get stuck having to retrace some of her path to explore the entire mound.

Visual Bonus — Do Not Turn Card Over

Bonus: Did Ruth arrive at the ruin on horseback or by jeep?

Answer: By jeep.

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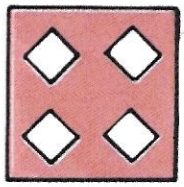
Answer: The correct answer is pictured below.



Bonus: How many stripes are there on the American flag?

Answer: Thirteen... symbolizing the original thirteen Colonies.

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Answer: Thursday.

Here's how: Start at the end of the sentence. You know today is Monday, therefore the day after tomorrow would be Wednesday. The day before would be Tuesday and two days after Tuesday would be Thursday.

Visual Bonus — Do Not Turn Card Over

Bonus: In what State did Buzzy recently go trout fishing? (Hint… it was written on his hat.)

Answer: Nevada, Topaz Lake to be exact.

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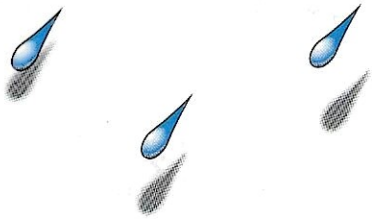
Answer: 38 years old.

Here's how: Normally one might think that the answer would be 39, with Fibius about seven months away from his 40th birthday. However, on the calendar, there is no year "0" between 1 B.C. and 1 A.D., and so the calculation is not the same as in a number count.



Visual Bonus — Do Not Turn Card Over

Bonus: How many pigeons have gathered to pay their respects to Fibius' monument?

Answer: Four.

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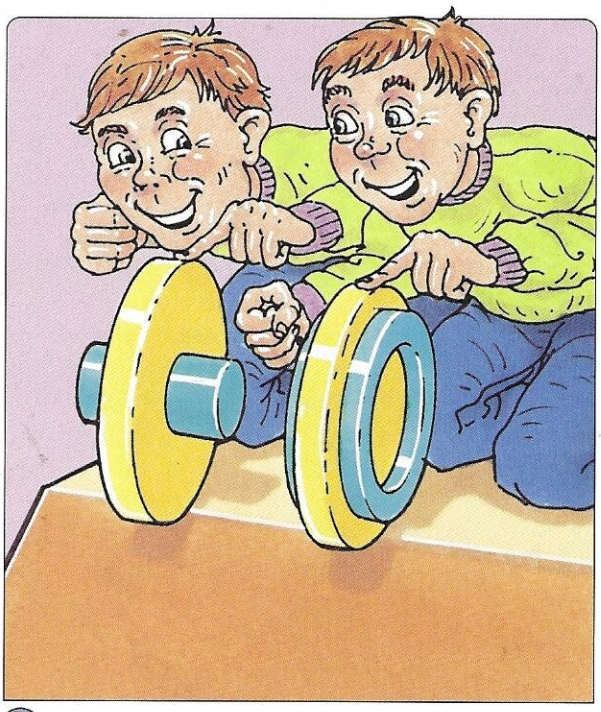

Keep on Rolling…

The Tucker boys, Jack and Dave, have designed two wheels. The yellow tread on both is the same size and weight. The blue hub detail on each, although different in size and shape, weighs exactly the same, 20 lbs. If the boys release the wheels at the same time, which wheel will reach the bottom of the ramp first?

Bacon and Eggs…

Lauren's latest entrepreneurial venture is raising Vietnamese pot-belly pigs and ostriches for fun and profit. Among her animals, she has 17 heads and 56 legs in all. How many pigs and how many ostriches does Lauren have?

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Answer: The wheel with the weight in the center will reach the bottom of the ramp faster.

Here's how: The center weighted wheel will have less resistance to spinning, since its main mass is more tightly packed and doesn't have as far to spin. It therefore has a lower rotational inertia than the rim-weighted wheel, and so gets moving faster in less time.

Bonus: Imagine that you are in a rocket ship, flying in outer space. If your drop a rock and a feather at the same time , which will fall to the floor first.

Answer: Actually, neither one will fall to the floor. Because there is no appreciable gravity in outer space, both objects will simply float around your cockpit, moving in whatever direction you have pushed them.

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Answer: Lauren has 11 pigs and 6 ostriches.

Here's how: Each animal has two hind legs, so 17 heads means 34 hind legs total; the remaining 22 legs must be the front legs of 11 four legged pigs. Therefore, 11 heads belong to pigs, and the remaining 6 heads belong to ostriches.

Bonus: The Ostrich lays the largest egg of any living bird… 6.8 inches long by 5.4 inches wide. What flying bird lays the largest egg? Is it: A. the California Condor, B. the Mute Swan, or C. the Wandering Albatross?

Answer: The Wandering Albatross, about 5.7 by 3.5 in., followed by the Mute Swan, 4.5 by 2.9 in. and the California Condor, 4.3 by 2.6 in.

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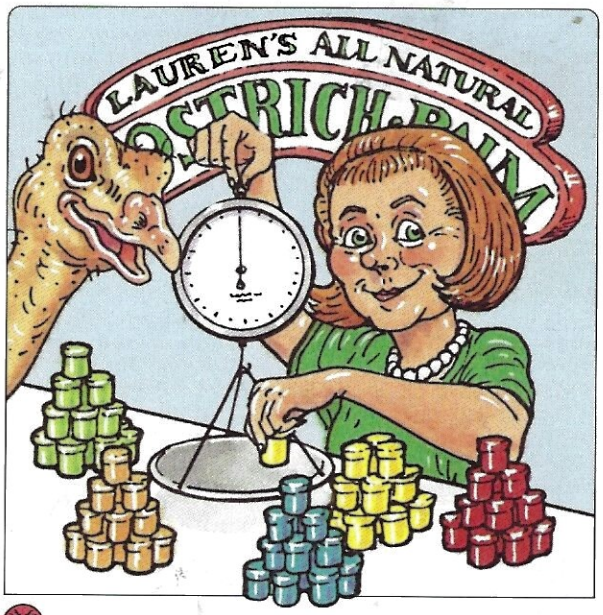
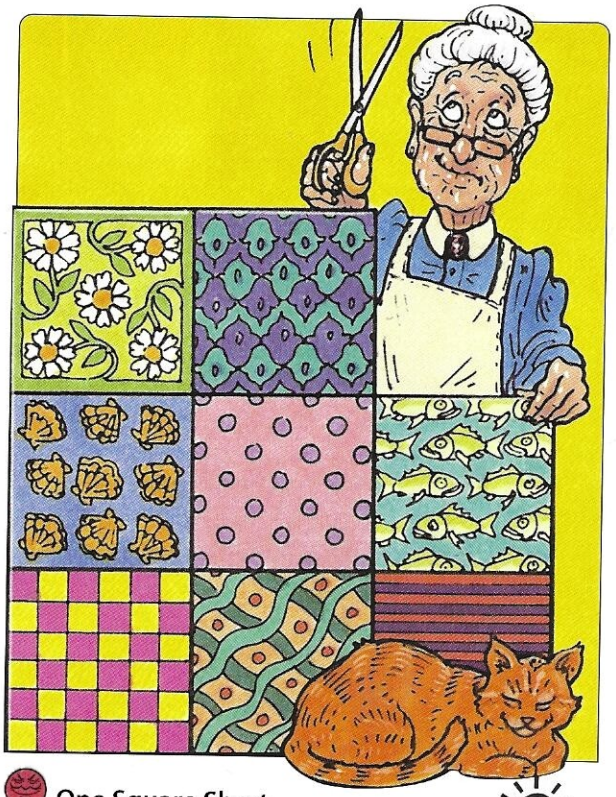


Overweight Jars…

Lauren has just unpacked her shipment of colored cosmetic jars, one dozen each of red, orange, yellow, green and blue jars. Each color jar is packed in its own box. All the jars should have weighed three ounces, but the packing slip noted that each jar in one of the boxes actually weighs 3.1 ounces. Luckily, Lauren owns a spring scale accurate to one tenth of an ounce. What is the minimum number of weighings that Lauren must make to discover the color of the overweight jars?

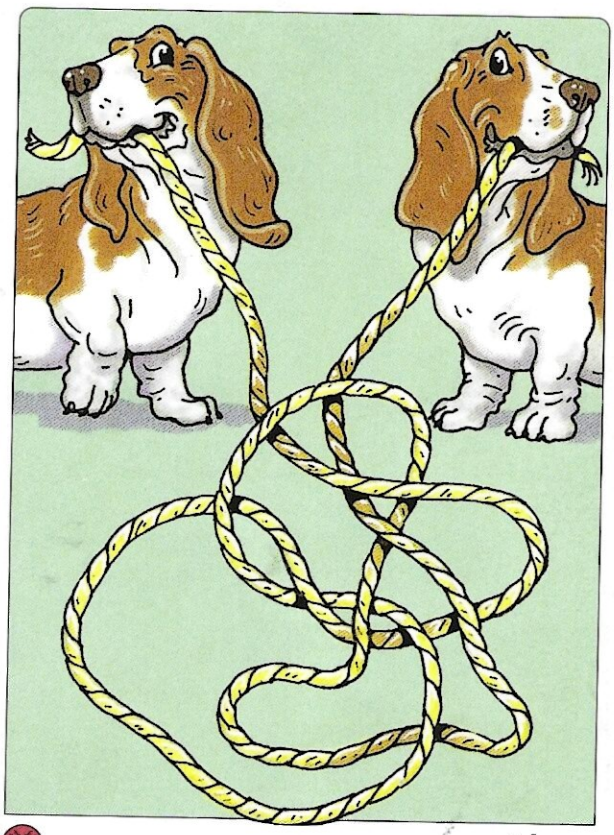
Speedway Trials…

To qualify for the big race, Enzo needs to average 60 miles per hour overall in his two warm-up heats, each heat one mile long. In his first heat he could only muster a 30 mile per hour average. How fast must Enzo drive in his second heat to qualify for the final? Will he be able to qualify?



One Square Short…

Blanche has run out of quilting material to make the last square. She's anxious to finish and doesn't want to buy any new material. Without wasting any of her existing cloth, can she make two straight cuts and end up with a square quilt?



Basset Pull…

On command, these two charming basset hounds are going to pull the rope tight. When they have finished tugging, will there be a knot in the rope?

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Answer: One weighing will do.

Here's how: Lauren can select one red jar, two orange jars, three yellow jars, four green and five blue jars, and weigh all these jars together. If the scale reads 45.1oz. the red jars are heaviest, if the scale reads 45.2 oz. the orange jars are heaviest, and so on. The number of tenth ounces over 45 oz. that the 15 jars weigh will reveal the color of the overweight jars.

Bonus: The term "ROYGBIV" refers to: A. a Russian sir name, B. colors of the rainbow, or C. a type of ostrich feather.

Answer: Colors of the rainbow. This is a mnemonic, or memory aid... each letter in "ROYGBIV represents the first letter of a color: red, orange, yellow, green, blue, indigo, and violet, respectively.

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Answer: Unfortunately, Enzo is already disqualified from the big race because of his slow time in the first heat.

Here's how: For Enzo to average 60 miles per hour in two warm-up heats of one mile each, he must be on the track for no longer than two minutes total (it takes one minute to drive one mile when traveling at 60 miles per hour). But given that he was traveling at 30 miles per hour, Enzo's first heat alone lasted two minutes, leaving him with the requirement of running the second heat in zero time.

Bonus: What do the names Duesenberg, Stutz and Bugatti have in common? Are they all: A. names of cities on the German - Switzerland border, B. names of defunct auto companies, or C. sir names of Indy 500 winners?

Answer: They are all names of defunct auto companies.

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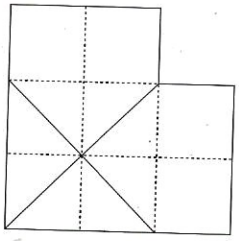
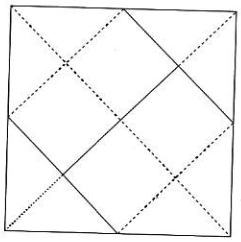
Answer: Yes. The two clever cuts are illustrated below.



How it was cut.



How it was joined.

Visual Bonus — Do Not Turn Card Over

Bonus: Were nature motifs included in any of the fabric patterns?

Answer: Yes.

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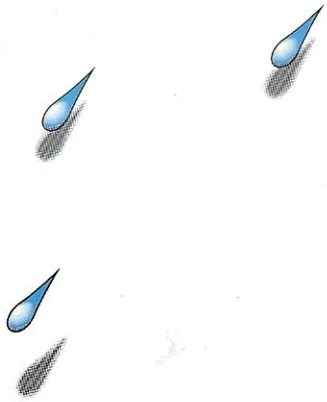
Answer: No, the tangles are not closed, and they will fall free without locking in a knot. May the best basset win!



Visual Bonus — Do Not Turn Card Over

Bonus: Is either basset hound wearing a collar?

Answer: No, neither dog is wearing a collar.

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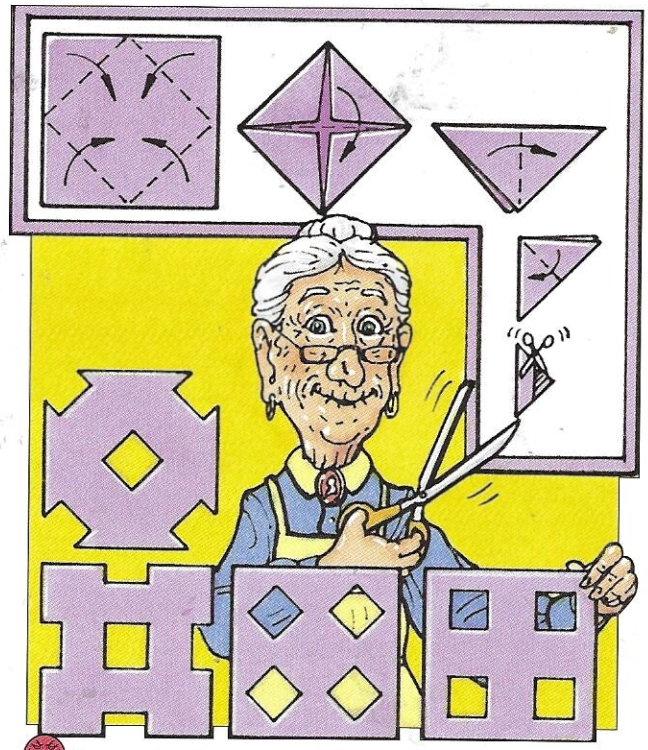
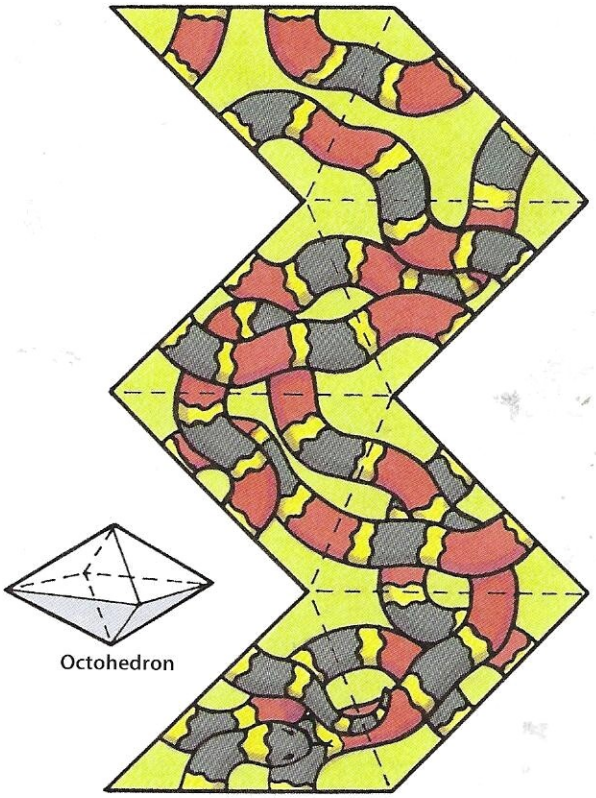


Lavender Square Fold and Cut…

Blanche runs a quilting class. She has asked her students to fold and cut a lavender square of fabric, following the pattern shown on the chart above. The results are in. Which of the four students' squares is the correct fold and cut as indicated by the chart?

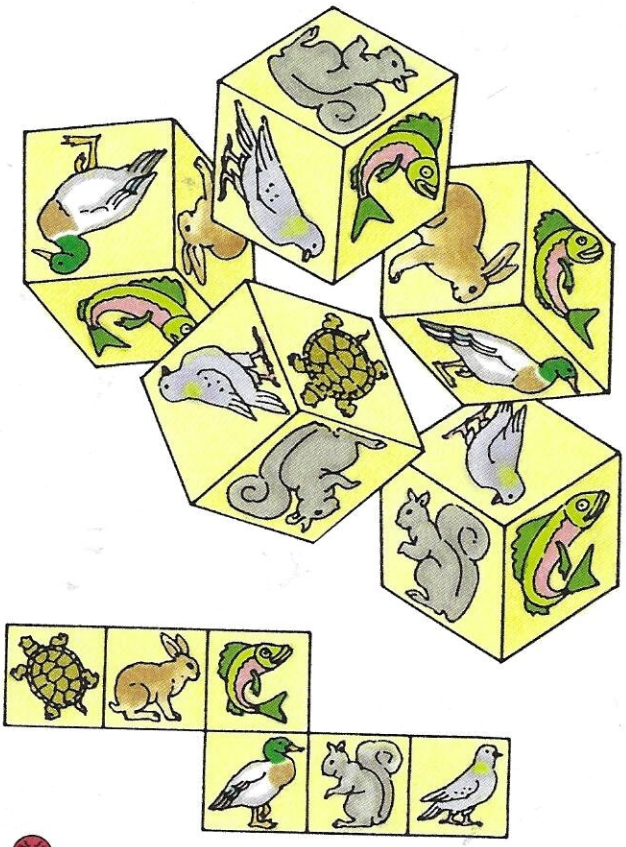


Pattern Match…

This flat pattern can easily fold into an octahedron. When folded together this way, will there be one continuous snake from head to tail, or not?

Fish Switch…

Clarence's favorite joke is to switch the signs on the fish barrels. Today he mixed up the signs on the carp barrel, the catfish barrel, and the carp-and-catfish barrel, deliberately hanging each sign on the wrong barrel. Clarence will let you see only one fish, but it can be from any barrel you choose. Using only this information, can you restore the signs to their rightful barrels? How?



Animal Cubes…

Only one of the five floating cubes has been made by folding the above pattern. Can you identify the cube that matches the pattern?

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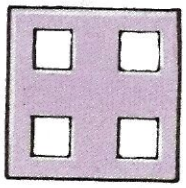
Answer: The correct answer is illustrated below.



Bonus: The cotton gin was invented in 1793 by: A. Eli Whitney, B. Ben Franklin, or C. Whitney Houston?

Answer: Eli Whitney.

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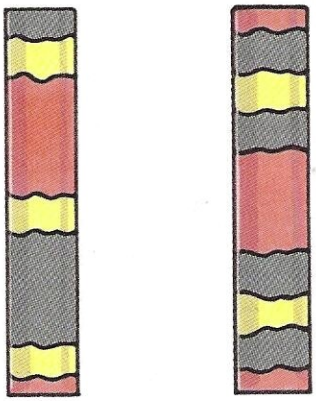
Answer: Yes there will be one continuous snake.



Coral Snake Scarlet King Snake

Visual Bonus — Do Not Turn Card Over

Bonus: Was the snake illustrated on the octahedron a non-poisonous Scarlet King Snake or the highly poisonous Coral Snake?

Answer: The highly poisonous Coral Snake.

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Answer: Yes.

Here's how: Start by choosing a fish from the "carp-and-catfish" barrel. Since every barrel is incorrectly signed, you already know that this barrel cannot contain "carp-and-catfish"… it has to contain only one type of fish. Say you drag out a carp… you can then correctly place the carp label on this barrel. Next ask, what fish are in the barrel labeled "catfish"? They cannot be carp, and they can't be catfish either or the label would be correct. They must be "carp-and-catfish". The "carp" barrel, then, must contain the catfish. That clever Clarence!

Bonus: What do jump boxes, jugging, and trotlining have in common? They are all: A. new steps Clarence is learning at dancing school, B. Victorian era parlor games, or C. ways to catch catfish.

Answer: B. Ways to catch catfish… Clarence likes baiting a mess of lines, fastening each line to an empty milk jug and stringing a bunch of jugs together hoping for the big haul (jugging).

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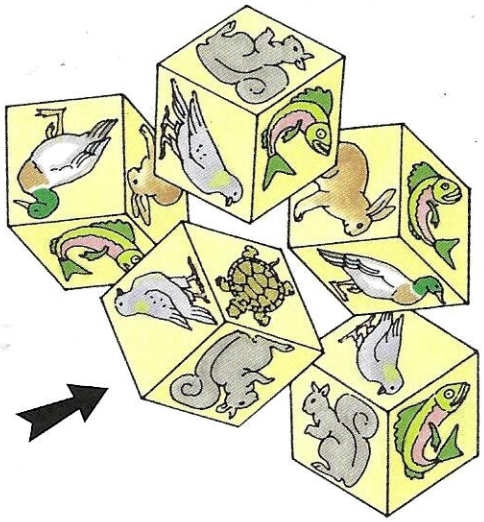
Answer: The cube folded from this pattern is indicated below.



Bonus: Which of the animals illustrated on the cubes has the longest life span? Is it the pigeon, the squirrel, the duck, the turtle, the trout, or the rabbit?

Answer: The turtle. Generally smaller aquatic turtles can survive for at least 50 years. Tortoises live somewhat longer, about 75 years. Some of the larger species, such as giant tortoises and sea turtles appear quite capable of surviving for a century.

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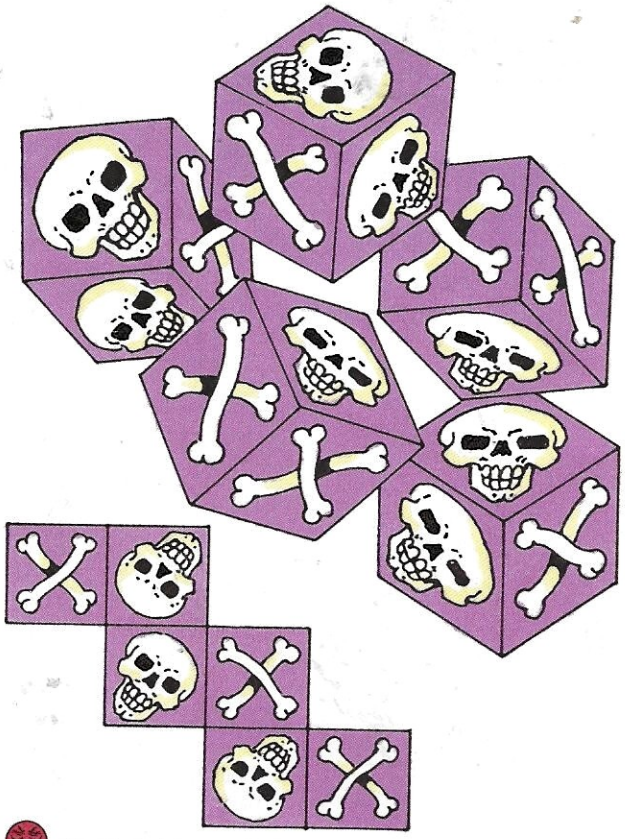
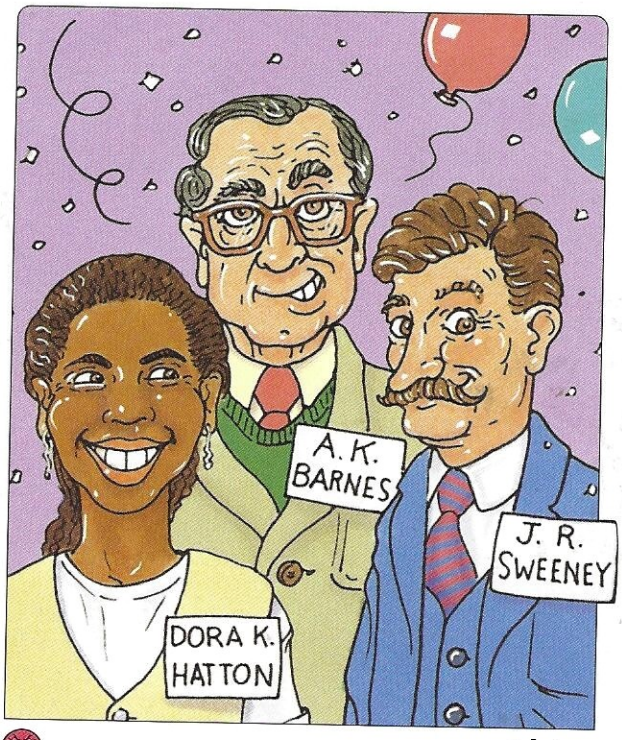


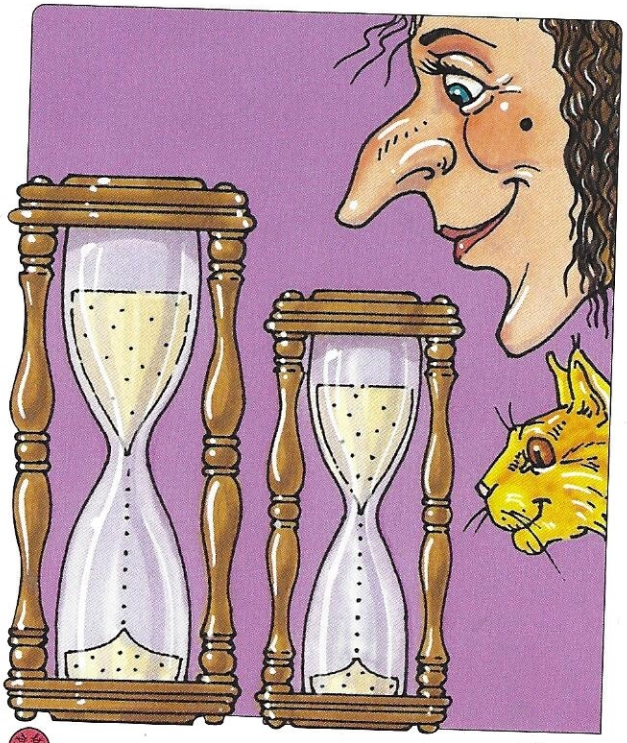
Skulls 'n Bones Cubes…

Only one of the five floating cubes has been made by folding the above pattern. Can you identify the cube that matches the pattern?



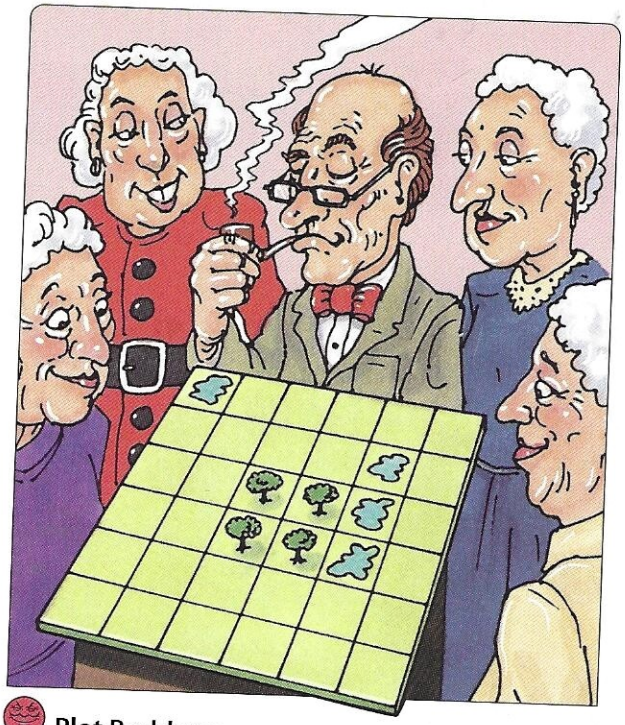
Convention Chuckle…

Dora K. Hatton, A. K. Barnes, and J. R. Sweeney had a big chuckle at the convention when they realized that the letters of their names, if rearranged, spelled out the names of each of their home States. From what State does each of these delegates hail?



Five Minute Timer…

The young sorceress is cooking up a brew that needs to simmer for five minutes, plus or minus a few seconds. All she has to measure with are a four-minute timer and a three-minute timer. Using only these instruments, can she successfully time her simmering? If so, how?



Plot Problems…

The Swensen sisters have purchased land with four trees and four ponds located as shown on the plot plan. They have asked Thomas the architect to divide the parcel of land, using the grid lines, into four identical plots. The problem is, each sister would like one tree and one pond on her individual plot. Can he do it? How?

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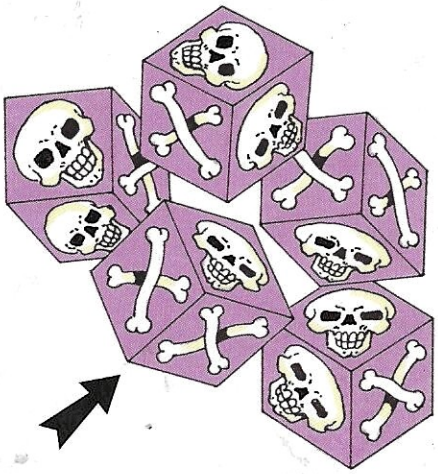
Answer: The cube folded from this pattern is indicated below.



Bonus: How many edges does a cube have?

Answer: Twelve.

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Answer: North Dakota, Nebraska and New Jersey.

Visual Bonus — Do Not Turn Card Over

Bonus: Are any of the conventioneers wearing glasses?

Answer: Yes, A. K. Barnes is.

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Answer: Yes, timing five minutes is a snap.

Here's how: Flip and start both timers at the same time. When the 3 minute timer ends turn it over quickly until the 4 minute timer ends. Then, turn the three minute timer over again to add the 1 minute needed to measure 5 minutes.

Visual Bonus — Do Not Turn Card Over

Bonus: Is the sorceress' beauty mark on her left cheek or her right cheek?

Answer: Her left cheek.

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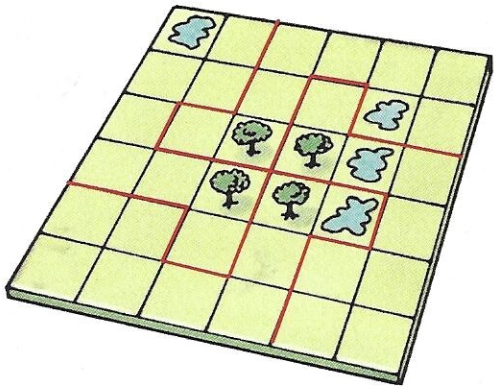
Answer: Yes.

Here's how: The correct plot divisions are shown below.



Bonus: What famous architect designed the house found on the back of the United States nickel? Was it: A. Charles Bullfinch, B. Charles Darwin, or C. Thomas Jefferson?

Answer: Thomas Jefferson.

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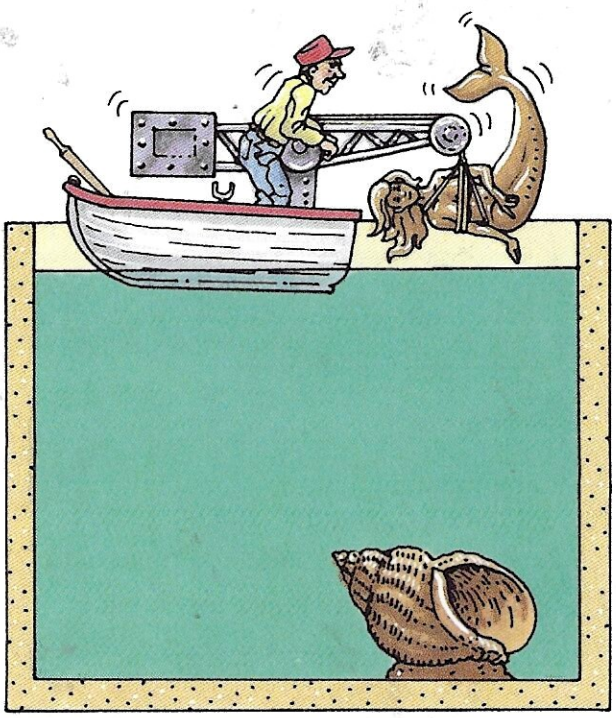
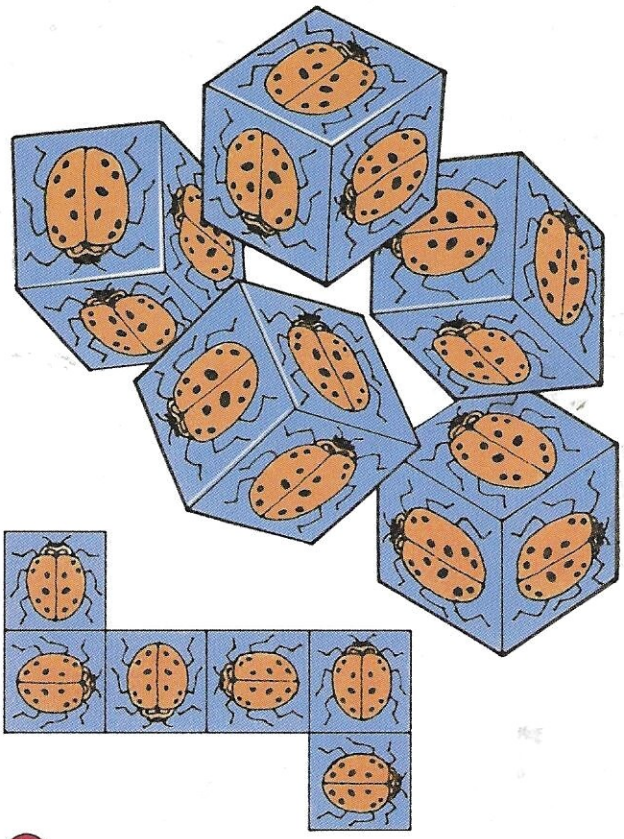


Bronze Mermaid…

Angelo is in his rowboat, about to lower a solid bronze mermaid into his pool. Once the sculpture is placed on her throne successfully, will the water in the pool have risen, fallen, or stayed the same level as shown here?



Ladybug Cubes…

Only one of the five floating cubes has been made by folding the above pattern. Can you identify the cube that matches the pattern?

Difference Triangle…

Mrs. Holderman, the math teacher, has given Betty a special math problem. She is to place the numbers from 1 to 6 in the circles of the triangle so that the numbers in every circle below two higher circles shows the difference between the two numbers in the higher circles. How should she position the numbers to accomplish this?

Magic Triangle…

Mrs. Holderman, the math teacher, has given Karen a special math problem. She is to arrange the numbers from 1 to 6 in the triangle so that the sum of each straight line of three circles gives the same result. How would you place the numbers?

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Answer: The water level will fall.

Here's how: When in the boat the mermaid pushes the boat down (thereby raising the water up around the boat) by an amount of water equal to the weight of the object. Once on the bottom and not attached to the boat, the mermaid will only cause the water to rise by an amount equal to the volume of water displaced. Bronze is extremely dense, so the weight of the sculpture displaces more water than the volume.

Bonus: Will the water level rise, fall, or stay the same when the mermaid is fully submerged but has not yet touched bottom?

Answer: Believe it or not, the water level will not change until the mermaid touches bottom and the pressure on the rope is released.

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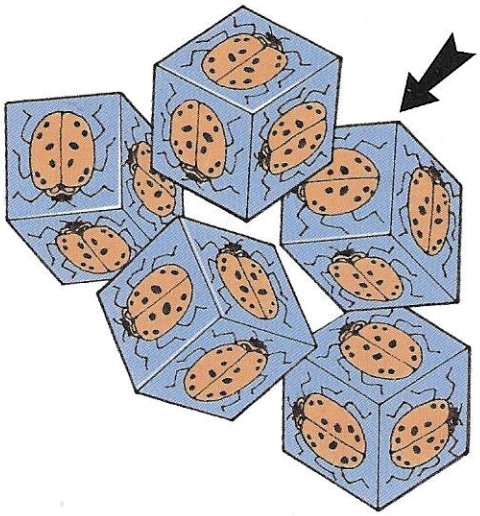
Answer: The cube folded from this pattern is indicated below.



Bonus: Is the ladybug a True Bug?

Answer: No. it belongs to the insect group known as Beetles (Coleoptera), not the group called True Bugs (Hemiptera).

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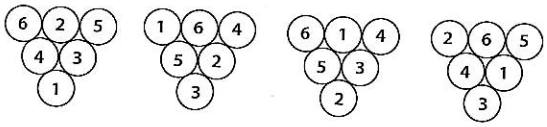
Answer: Four possible solutions (excluding reflections) are illustrated below.

Here's how: The number 6 must be in the top row since it is not the difference between any other two numbers. From there, it is pretty much a matter of trial and error, unless you're real good in advanced math.



Bonus: What is the first number that, when spelled out, contains the letter "a"? Start with "zero" and consider only whole numbers in ascending order. The word "and" does not count.

Answer: One thousand.

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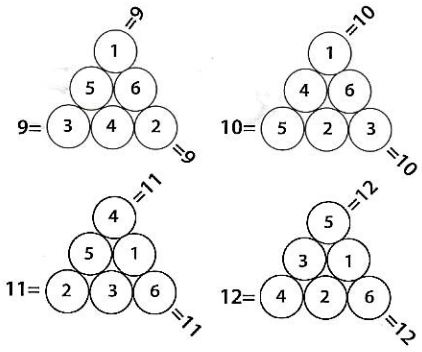
Answer: Four unique solutions (excluding rotations and reflections) are illustrated below.

Here's how: Figure it this way… the total for each line can't be smaller than 9 because the smallest group containing the 6 has to add up to 9 (1 + 2 + 6 = 9). This gets you started. Switch and swap explorations will amazingly yield an additional 3 answers.



Bonus: Counting from 1 to 100, how many 7's do you pass along the way?

Answer: 20 of them.

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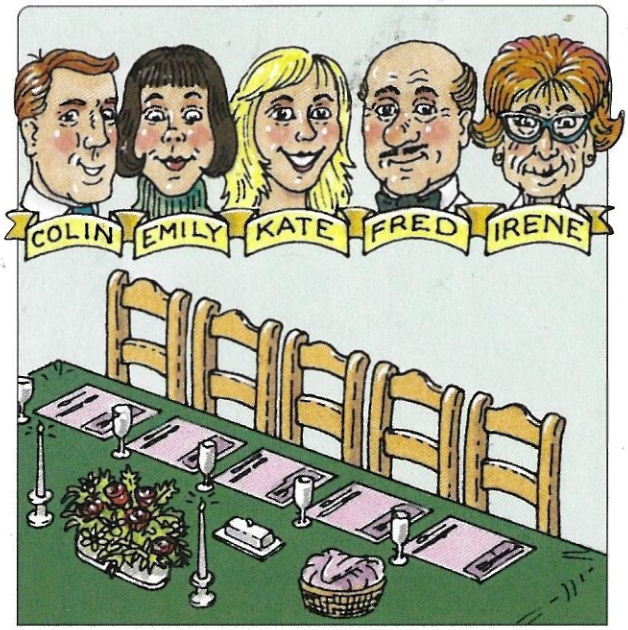
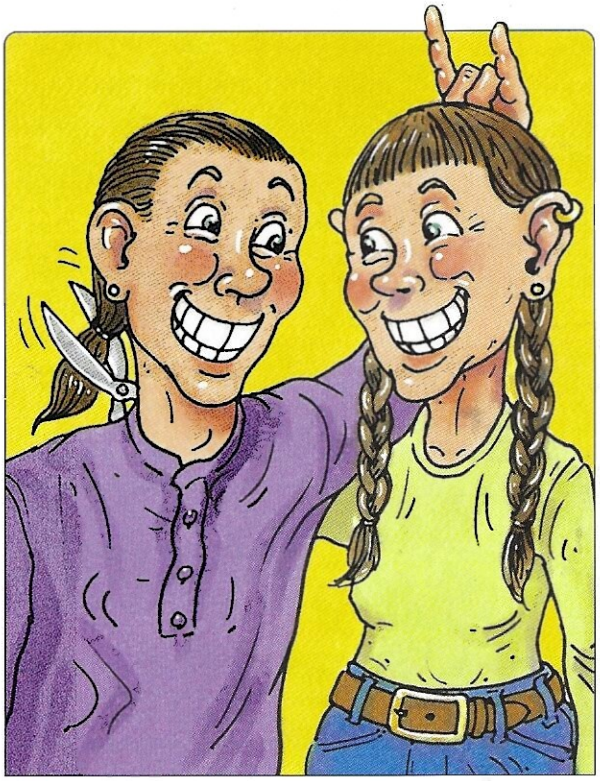


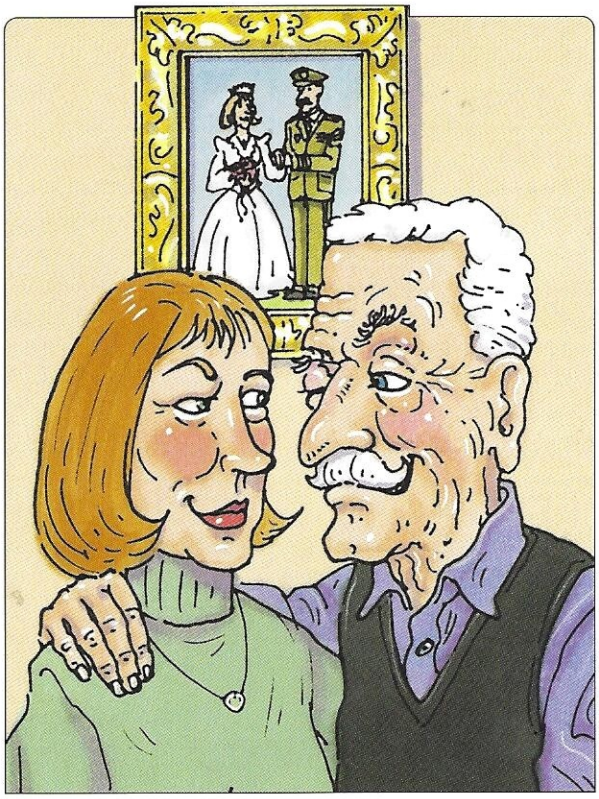
Seating Trouble…

At the wedding reception, the five guests shown above don't know how to arrange themselves at the dinner table. They ask the bride's mother, who responds, "As I remember, Colin isn't next to Kate, Emily isn't next to Fred or Kate. Kate isn't next to Irene; neither is Emily, and Fred should sit on Irene's left." As you look at them from the opposite side of the table, can you correctly seat the guests from left to right?



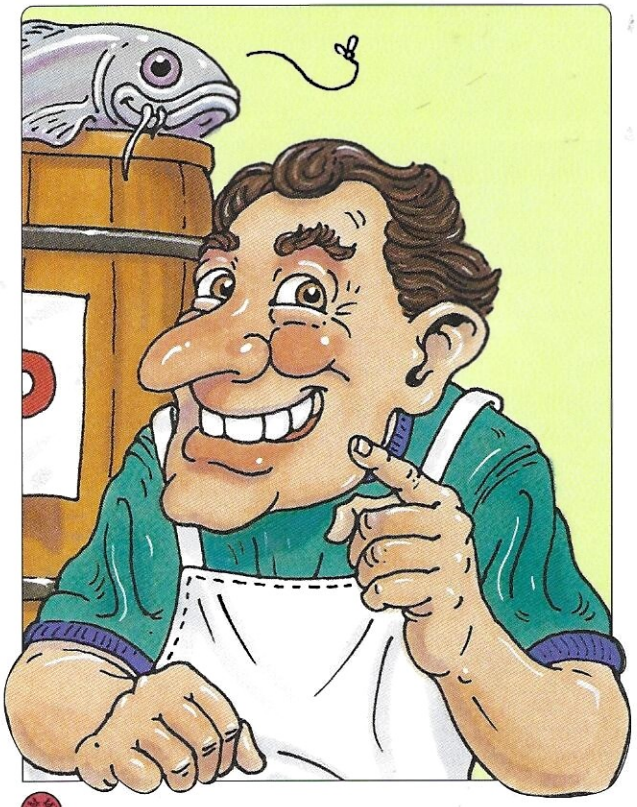
Big Family…

Chad and Blossom (brother and sister) come from a large family. Chad has as many brothers as he has sisters, but Blossom has only half as many sisters as she has brothers. How many brothers and sisters total are in the family?



Bride's Age…

When Helen and Frank were married 21 years ago, Frank was three times as old as Helen. Today he is twice as old as she. How old was Helen on her wedding day?



The Riddler…

Clarence would like to share his newest riddle with you. "The day before two days after the day before tomorrow is Monday," he confides. "What day is it today?"

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Answer: The correct answer is shown below.

Visual Bonus — Do Not Turn Card Over

Bonus: Were the two candles on the dinner table lit or not lit?

Answer: They were both lit.

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Answer: There are four boys and three girls in the family.

Here's how: To start, we know that there is one more boy than girl, since Chad doesn't count himself as his own brother; and Blossom's sisters are one less than the total number of girls, since she wouldn't include herself in her count of sisters. Thus the number of Blossom's brothers (all the boys) minus two is the same as the number of her sisters; and since she has two times more brothers than sisters, she must have four brothers and two sisters.

Visual Bonus — Do Not Turn Card Over

Bonus: What imminent surprise does Blossom have in store for her brother?

Answer: Chad's ponytail is about to become history.

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Answer: Helen was 21 years old when she was married.

Here's how: Helen's age today is the same as the difference between her and Frank's ages. Her age 21 years ago was half the difference in ages, which means that two times her age then also equaled the difference (which stays constant); this in turn means that she is now twice as old as she was then. Since her age now is the same as 21 years plus her age then, she is now 42 and she was then 21. Frank was then 63 and he is now 84.

Visual Bonus — Do Not Turn Card Over

Bonus: Was Frank in the military at the time of his marriage to Helen?

Answer: Yes... (note the uniform in the wedding picture.)

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Answer: Sunday.

Here's how: Separate out the sentence as follows:
"...the day before tomorrow..."=[TODAY]
"The day before two days after [TODAY]"=[TOMORROW]
"[TOMORROW] is Monday"
If tomorrow is Monday, then surely today is Sunday. Boy, isn't Clarence tricky!

Bonus: How many months have thirty days in them?

Answer: Eleven of them. All but February have at least thirty days, though many have one more day as well.

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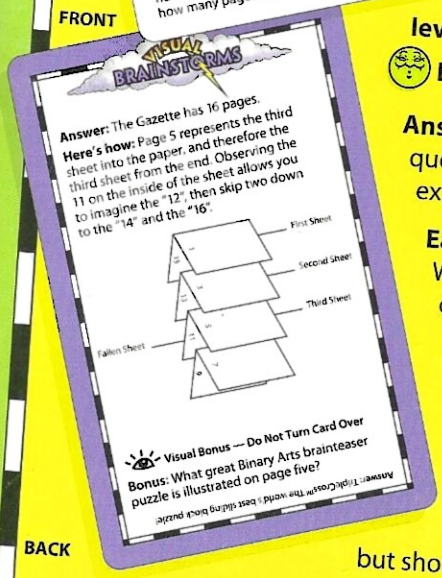
FRONT



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